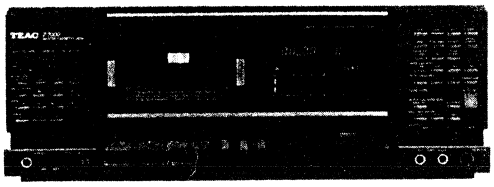
TEAC®



SERVICE MANUAL

Z-7000

Master Cassette Deck

Effective: July 1983 B-30136

5704017700

1 SPECIFICATIONS AND SERVICE DATA

仕様及びサービス・データ

Notes:

1. Improvements may result in changes in specifications and service data.
2. 0 dB is referenced to 0.775 V in this manual.

注

1．仕様およびサービス・データは改善のため，予告なく変更することがあります．

2．本マニュアルの0 dBは0.775Vを基準としています．

SPECIFICATIONS

Track system 4-track, 2-channel stereo
Heads 3: Erase, record and playback
Type of tape Cassette tape, C-60 and C-90 (Philips type)
Tape speed 4.76 cm/s (1-7/8 ips)
Input (level and impedance)
MIC: Specified input level: −57 dB (1.09 mV)/10 kohms
Minimum input level: −67 dB (346 μV)
LINE IN: Specified input level: −9 dB (275 mV)/50 kohms
Minimum input level: −19 dB (86.9 mV)
Output (level and impedance)
OUTPUT: Specified output level: −5 dB (436 mV)
50 kohms or more
PHONES: Specified output level: −5 dB (436 mV)/8 ohms
Equalization
METAL: 3180 μs + 70 μs
CrO_2: 3180 μs + 70 μs
NORMAL: 3180 μs + 120 μs
Head configuration
1/2-track, 1-channel erase head
1/4-track, 2-channel record and playback head
Motors 1 DC FG DD Servo Motor (for Capstan Drive)
2 Coreless DC DD motors (for Reel Drive)
1 DC motor (for Ancillary Control)
Bias frequency 100 kHz
Operation position Horizontal
Power requirements
100/120/220/240 V AC, 50/60 Hz, 48 W (General Export Models)
120 V AC, 60 Hz, 48 W (U.S.A./Canada)
220 V AC, 50 Hz, 48 W (Europe)
240 V AC, 50 Hz, 48 W (U.K./Australia)
Dimensions See Fig. 1-1 on page 3.
Weight 17.9 kg (39 7/16 lbs) net

SERVICE DATA

MECHANICAL

Tape speed deviation 3000 Hz ± 45 Hz
Tape speed drift 30 Hz
Wow and flutter
Playback: 0.03% (WRMS)
Record/playback: 0.15% (RMS)
Pinch roller pressure
Right: 310 to 380 g (10.9 to 13.4 oz)
Left: 135 to 165 g (4.7 to 5.8 oz)
Reel Torque
Take-up: 35 to 50 g-cm (0.48 to 0.70 oz-inch)
Supply: 9 to 11 g-cm (0.12 to 0.16 oz-inch)
F.F./REW: 90 g-cm or more
Fast winding time 90 seconds for MTT-501 (C-60)

ELECTRICAL

Frequency response See Fig. 6-11 to 6-14
Signal-to-Noise Ratio (Overall)
60 dB (3% THD Level, Weighted, Metal Tape);
72 dB at 5 kHz (Dolby B NR)
82 dB at 1 kHz (Dolby C NR)
92 dB at 1 kHz (dbx)
Erase efficiency 65 dB min. at 1 kHz (measured with input 10 dB higher than the specified input level)
Channel separation 35 dB min. at 1 kHz
Adjacent track crosstalk 45 dB min. at 125 Hz
Total harmonic distortion
2.0% or less with METAL and CrO_2 tapes
3.5% or less with NORMAL tape

- Dolby Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
- dbx Noise Reduction system made under license from dbx, Incorporated. The name "dbx" and the dbx symbol are trademarks of dbx, Incorporated.

- ドルビーノイズリダクションシステムは，ドルビー研究所からの実施権に基づき製造されています．
- ドルビー及び □□は，ドルビー研究所の登録商標です．
- dbxおよびdbxマークはdbxインコーポレーテッドの登録商標です．
- dbxシステムはdbxインコーポレーテッドの実施権に基づいて製造されています．

CAUTION

! Parts marked with this sign are safety critical components. They must always be replaced with identical components – refer to the appropriate parts list and ensure exact replacement.

注 意

! 印は安全重要部品です．交換する時は必ずマニュアルで指定の部品を使用してください．

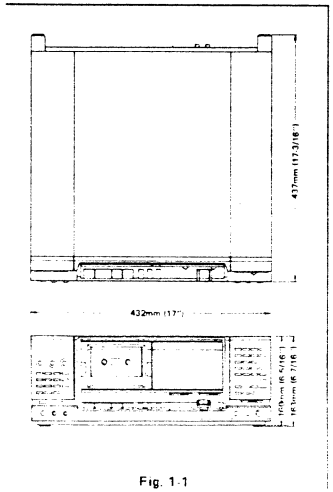


Fig. 1-1

2 REMOVAL OF EXTERNAL COMPONENTS

外装部品の外し方

Disassemble in number-order
番号順に外して下さい

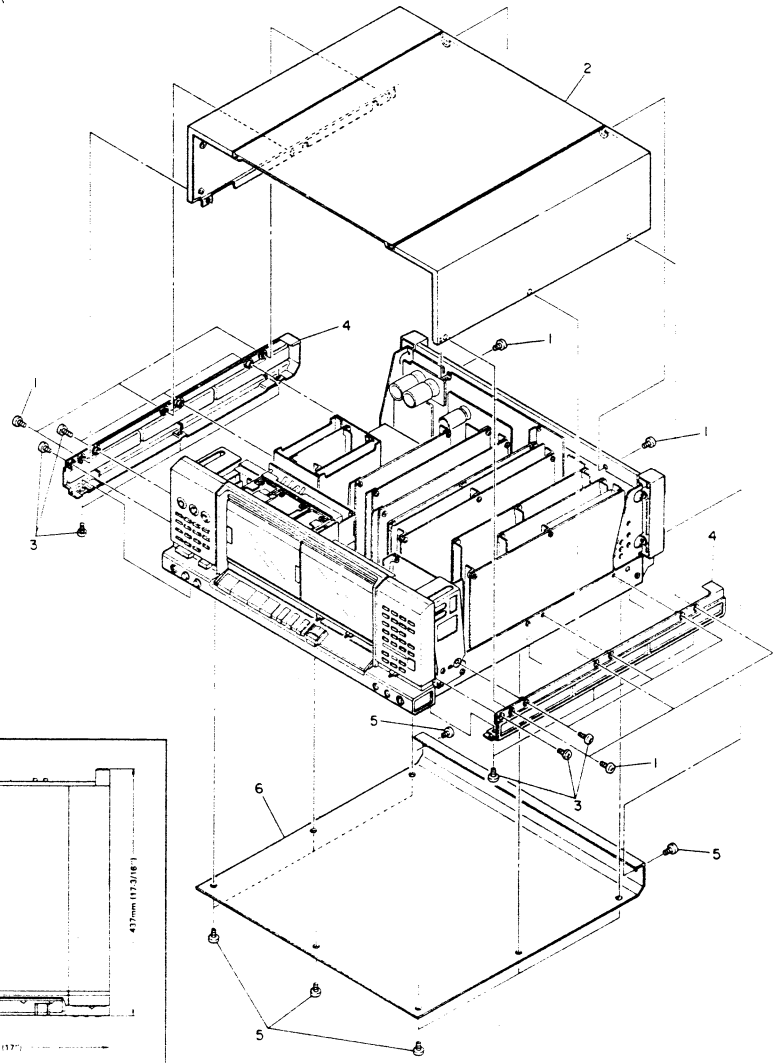
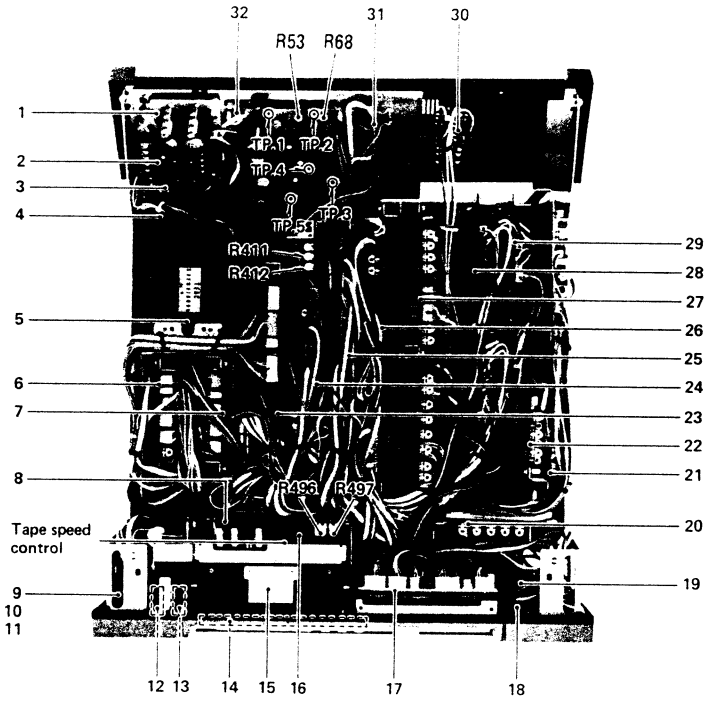


Fig. 2-1

3 PARTS LOCATION

部品配置図



1	CONDENSER PCB		17	METER PCB	
2	DIODE PCB (1)		18	SW PCB (F)	KEY UNIT 1R
3	DIODE PCB (2)		19	VOLUME PCB (2)	
4	DIODE PCB (3)		20	TEST TONE PCB	
5	VOLTAGE SELECTOR* or FUSE PCB**		21	REC AMPL PCB	
6	FADER PCB		22	REC EQ PCB	
7	MIC AMPL PCB		23	AMPL CONTROL PCB	
8	MECHANISM PCB (1)		24	SYSTEM CONTROL PCB	
9	FADE VR PCB	KEY UNIT 1L	25	COUNTER PCB	
10	SW PCB (A)	KEY UNIT 1L	26	AUTO BIAS PCB	
11	SW PCB (C)	KEY UNIT 1L	27	PLAYBACK AMPL PCB	
12	HEADPHONE VR PCB		28	DOLBY PCB	
13	PITCH CON PCB		29	DBX PCB	
14	CONTROL SW PCB		30	IN/OUTPUT PCB	
15	MECHANISM PCB (3)		31	TRANSISTOR PCB	
16	DC capstan motor assy		32	POWER SUPPLY PCB	

* Voltage selector: GENERAL EXPORT only

** FUSE PCB: All except JAPAN and GENERAL EXPORT

Fig. 3-1 Top view 上面図

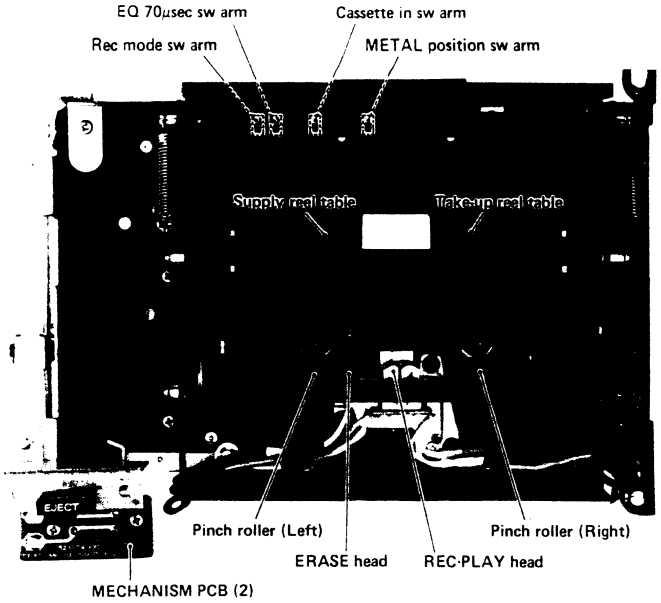


Fig. 3-2 Transport front view トランスポート前面図

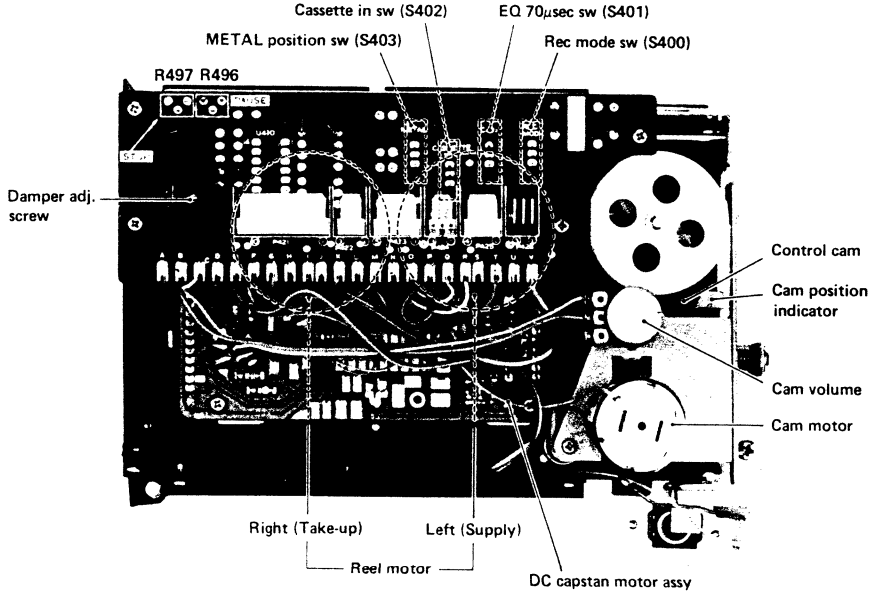


Fig. 3-3 Transport rear view トランスポート後面図

4 VOLTAGE ADJUSTMENTS AND CHECKS

電源電圧の調整と確認

4-1 VOLTAGE CONVERSION (GENERAL EXPORT MODELS ONLY)

1. Always disconnect the power line cord before making these adjustments.
2. Locate the voltage selector above the transformer.
3. Using a regular screwdriver, turn the selector until the numerals corresponding to the voltage requirements of your area appear.

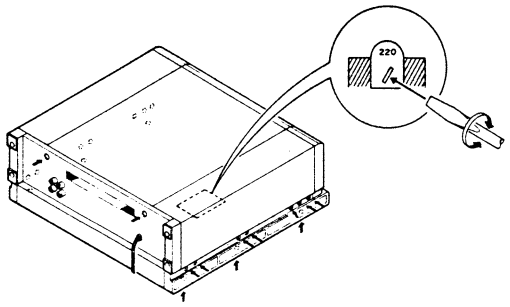


Fig. 4-1 Voltage conversion（電源電圧切替）

4-2 DC VOLTAGE ADJUSTMENTS AND CHECKS

1. See p. 4 fig. 3-1 for adjustment and check points.
2. Adjust R53 so that the voltage of the POWER SUPPLY PCB TP.1 becomes +5.8 V.
3. Adjust R68 for a TP.2 voltage of +25 V.
4. Make sure TP.3 voltage is +15 V ± 0.75 V, TP.4 voltage −15 V ± 0.75 V, and TP.5 voltage +13.5 V ± 0.67 V.

4-2 DC電圧とチェック

1．調整及びチェック・ポイントは4ページの図3-1を参照して下さい．
2．POWER SUPPLY PCBのTP.1の電圧が＋5.8Vとなるようにする．
3．TP.2の電圧が＋25Vとなるよう R68を調整する．
4．TP.3の電圧が＋15V±0.75V，TP.4の電圧が−15V±0.75V，TP.5の電圧が＋13.5±0.67Vであることを確認する．

5 MECHANICAL ADJUSTMENTS AND CHECKS

機構部の調整と確認

5-1 CASSETTE HOLDER ADJUSTMENT

1. With a cassette inserted, make sure that there is a clearance A of 0.9 to 1.3 mm between the cassette and the cassette holder.
2. If the clearance A is not within the 0.5 – 1.3 mm range, adjust it with screw B. (Fig. 5-2 shows the upper left part of the transport as seen from behind. There is a similar holder adj. screw in the upper right part.)
3. With a cassette inserted make sure that the cassette holder closes properly no matter where it is pressed on the top.

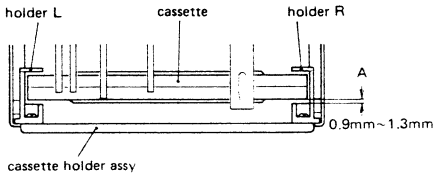


Fig. 5-1 Holder top view（ホルダー上面図）

5-1 カセット・ホルダの調整

1．カセット・ハーフを装着した時，ハーフとカセット・ホルダとのスキ間Aが0.9mm～1.3mmの範囲に入っていることを確認する．
2．A部のスキ間が上記の範囲外のときは，スキ間が0.9mm～1.3mmになるようネジBで調整する．
(図5-2はトランスポート左上部を背面から見た図です．右上部にも同様の調整ネジがあります)．
3．カセットを装着する時，カセット・ホルダ上部のどの部分を押しても確実にカセットが装着できること．

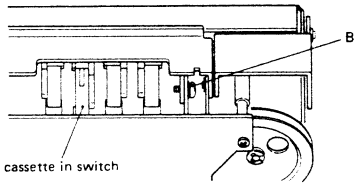


Fig. 5-2 Holder adj. screw（ホルダー調整ネジ）

5-2 ADJUSTMENT OF CONTROL CAM POSITION

1. Insert an empty cassette (or push in the cassette-in switch with a finger) and place the deck in PAUSE mode.
2. Adjust R496 (MECHANISM PCB (1)) so that the center PA hole of the control cam aligns with the reel motor mounting plate reference line.
3. Next, rotate the cam clockwise and counterclockwise and adjust R496 so that the distances between the center PA hole and both beginning points of cam motor vibration are equal.
4. Place the deck in STOP mode and adjust R497 as explained above for R496, this time refering to the center ST hole.

5-2 コントロール・カムの位置調整

1．テープのない空カセットを装着（カセット・イン・スイッチを手でオンしても可）し，PAUSE状態にする．
2．コントロール・カムのPA範囲の中心穴が，リール・モータ取付板の基準線に一致するようR496(MECHANISM PCB (1))を調整する．(図3-3)
3．次に手でカムを正転・逆転させ，カム・モータの振動が始まる点がいずれもカムのPA範囲の中心穴から等間隔になるようR496を微調整する．(図3-3)
4．デッキをSTOP状態にし，カムのST範囲についてR497で上記と同様に調整する．

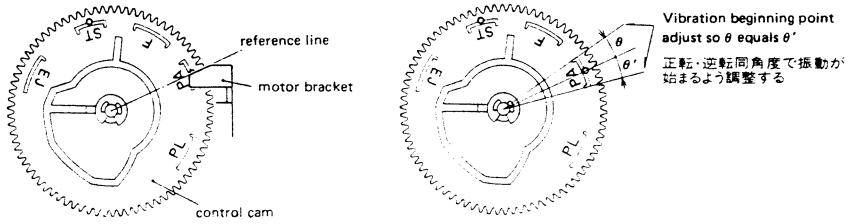


Fig. 5-3 Control cam adj. コントロール・カム調整

5-3 PINCH ROLLER HEIGHT ADJUSTMENT

5-3-1 PINCH ROLLER PLAY

1. Make sure thrust play of the left and right pinch rollers in STOP mode is 0.1 – 0.2 mm.
2. If not, adjust screws E and G for a play of 0.1 – 0.2 mm.

5-3-2 HEIGHT ADJUSTMENT OF THE RIGHT PINCH ROLLER TAPE GUIDE

1. Insert head check jig A (5736006600) and place the deck in PLAY mode.
2. Adjust nut F so that head check jig B (5736006700) fits exactly into the right pinch roller guide.

Note: Hereafter, do not move the tape guide more than ±0.1 mm.

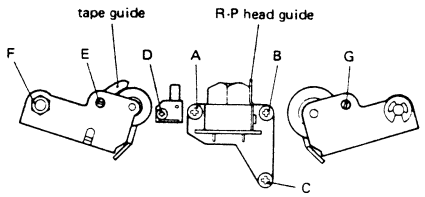


Fig. 5-4

5-4 ERASE HEAD POSITION CHECK AND ADJ.

1. Make sure the erase head is vertical to the cassette.
2. If not, adjust screw D (shown in fig. 5-4) so that the head comes within the adj. area (fig. 5-6).

5-5 REC & PLAY HEAD ADJUSTMENT

5-5-1 ADJUSTMENT OF REC & PLAY HEAD POSITION

1. Place the deck in PLAY mode. Make sure head check jig B touches the surface of the REC & PLAY head when the other end of the jig is positioned between the jig A line markers (fig. 5-7).

5-5-2 REC & PLAY HEAD HEIGHT ADJUSTMENT

1. Place the deck in PLAY mode. Adjust screw A (fig. 5-4) so that head check jig B is aligned with the REC & PLAY head guide.
2. Adjust screws B so that the head is in a horizontal position. (Take care not to move screw C.)

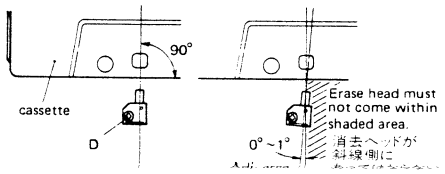


Fig. 5-6

5-3 ピンチ・ローラの高さ調整

5-3-1 ピンチ・ローラのガタ

1．STOP状態で左右のピンチ・ローラのスラスト・ガタは各0.1mm～0.2mmであることを確認する。

2．もし上記の範囲外の時は、ネジ及びEGで0.1mm～0.2mmになるよう調整する。

5-3-2 左ピンチ・ローラのテープ・ガイド高さ調整

1．高さヘッド治具(A)(品番5736006600)を装着し、PLAY状態にする。

2．左ピンチ・ローラのテープ・ガイドにヘッド治具(B)（品番5736006700）が完全に入るようナットFを調整する。

注意　この後テープ・ガイドは±0.1mm以上動かさないこと

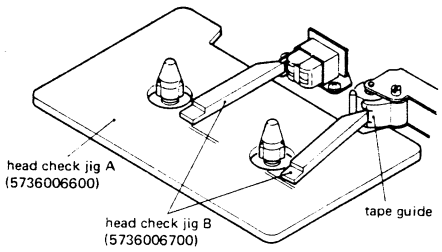


Fig. 5-5

5-4 消去ヘッド取付位置の確認と調整

1．消去ヘットはカセットに対し垂直になっていること。

2．もし垂直でない時は図5-4にポすネジDで図5-6の範囲内に入るよう調整する。

5-5 録・再ヘッドの調整

5-5-1 録・再ヘッドの位置確認

1．PLAY状態で、ヘッド治具(B)を録・再ヘッドの先端に当てたとき、ヘッド治具(B)他端が高さヘッド治具(A)の基準範囲内にあることを確認する。(Fig.5-7)

5-5-2 録・再ヘッドの高さ調整

1．PLAY状態にし、ヘッド治具(B)を録・再ヘッド・ガイドに一致するよう図5-4のネジAを調整する(図5-5参照)。

2．ヘッドが水平になるようネジBを調整する。（ネジCは動かさないこと)。

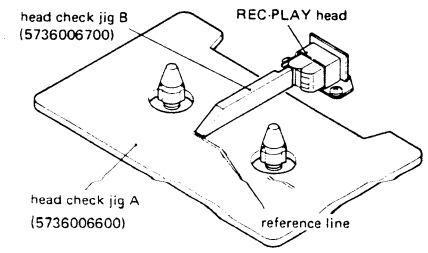


Fig. 5-7

5-6 PINCH ROLLER PRESSURE MEASUREMENT

1. With the cassette holder shut and no tape loaded, put the deck in the play mode after pushing the cassette-in switch sensor arm upwards and holding it.
2. Hook a spring scale on the pinch roller assembly as shown in the illustration.
3. Pull the scale downwards until there is sufficient force to separate the pinch roller from the capstan shaft.
4. Ease pressure until the pinch roller makes just enough contact with the capstan shaft so that the pinch roller just begins to turn. At this point, note the reading on the scale.
   Right: 310 g to 380 g
   Left: 135 g to 165 g

5-7 REEL TORQUE ADJUSTMENT

1. Load the cassette torque meter on the deck and read the pointer indication on the dial scale for each tape transport operation. The measured torque should be within the following values:
2. If not, adjust the semi-variable resistor on the SYSTEM CONTROL PCB to obtain.

	Torque	Adj.
Take-up	35~50g · cm (0.48 to 0.70 oz-inch)	R412
Supply	9~11g · cm (0.12 to 0.16 oz-inch)	R411
F.F./REW	90g · cm (1.2 oz-inch) or more	—

5-8 TAPE RUNNING ALIGNMENT

The following adjustments and checks should be made with back-tension torque under 4 g-cm.

1. Play MTT-901 and MTT-902. Make sure that the tape does not curl at the tape guide and REC & PLAY head guide.
2. If the tape curls at the left pinch roller tape guide, adjust REC & PLAY head screw B (fig. 5-4) within 3/4 of a turn. When curling has disappeared, adjust screw A in the same manner to maintain the horizontal position of the head.
3. Play MTT-902 from the very beginning, making sure that the joint between leader tape and magnetic tape does not curl at any guide. If it curls at top of the left tape guide, tighten screw B by up to 1/8 of a turn.
   If it curls at the bottom, losen screw B by up to 1/8 of a turn. After these adjustments, rewind the tape to the beginning once more and play it, checking for curling at the tape guides. Then set back tension to 8 g-cm and play a Maxell XL II C-90 from the very beginning. Make sure the tape does not curl or jump out at the tape guide. After these adjustments and checks, reset back tension to 9 – 11 g-cm.

5-6 ピンチ・ローラ圧着力確認

1．実し法による測定値

右：310 g～380 g

左：135 g～165 g

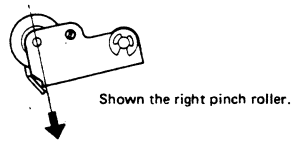


Fig. 5-8

5-7 リール・トルクの調整

1．カセット型トルク・メータによる測定値が下表の範囲内であることを確認する。

2．範囲外のときはSYSTEM CONTROL PCBの半固定抵抗(図3-1参照)を調整する。

	トルク	調整個所
テイクアップ・トルク	35～50 g · cm	R412
バックテンション・トルク	9～11g · cm	R411
早送りトルク	90 g · cm以上	—

5-8 テープ走行調整

以下の調整・確認はバックテンション・トルクを4 g · cm以下にして行なう。

1.MTT-901及びMTT-902をPLAYさせ、テープ・ガイド及び録・再ヘッド・ガイド部でテープがカールしないことを確認する。

左ピンチ・ローラのテープ・ガイドでテープがカールする場合は、録・再ヘッドのBネジ(図5-4参照)を3/4回転以内の範囲で調整する。カールが消失したらAネジを同様に調整してヘッドの水平を保つ。

2.MTT-902を巻始めの位置からPLAYし、リーダー・テープと磁気テープの継ぎ目が各ガイドでカールしないか確認する。

このとき左テープ・ガイドの

上でカール：Bネジを1/8回転の範囲で締め込む。

下でカール：Bネジを1/8回転の範囲で緩める。

3.調整後再度巻始め位置からPLAYし、各ガイドでのカールの有無を確認する。

バックテンションを8 g · cmに設定し、Maxell XL IIC-90 を巻始めからPLAYして、テープがテープ・ガイドでカールしたり外れたりしないことを確認する。

調整・確認後バックテンションを9～11 g · cmの範囲内に戻す。

5-9 TAPE SPEED ADJUSTMENT

1. Connect a frequency counter to the deck as shown in Fig. 5-9.
2. Play a tape for more than five minutes to warm up the deck, then load a TEAC MTT-111 test tape containing a 3000-Hz test tone and play the test tape.
3. While the tape is playing, use a non-metallic or insulated screwdriver and adjust the control on the DC capstan motor assy (Refer to Fig. 3-1) for a reading of 2995 to 3005 Hz on the frequency counter.
4. Play the tape at the beginning and at the end, and check that the speed deviation is within the prescribed limits by observing that the reading on the frequency counter never deviates more than ±45 Hz from 3000 Hz, nor drifts more than 30 Hz at any given time.

5-10 WOW AND FLUTTER

Note: These measurements should be made at the beginning, middle and the end of the tape.

1) PLAYBACK
1. Connect a wow-and-flutter meter to the deck as shown in Fig. 5-9.
2. Load and play a TEAC MIT-111 test tape.
3. Check that the reading on the wow-and-flutter meter is within 0.03% (WRMS).

2) RECORD/PLAYBACK
4. Load a blank TEAC MTT-502 test tape and record a 3000-Hz signal.
5. Rewind the tape to the beginning of the recorded section, and play it.
6. The wow-and-flutter should not be more than 0.15% (RMS).

5-11 DAMPER ADJUSTMENT

1. Adjust the damper adj. screw (see fig. 3-3) so that it takes the damper 0.5 – 1 sec. to open the cassette compartment. During this adjustment, the cassette cover should be in place, but no cassette should be loaded.

5-9 テープ速度の調整

1．MTT-111を使用して，テープ速度が3000Hz±45Hzの範囲内であることを確認する．
2．範囲外のときはDC capstan motor assyのPCB上の半固定抵抗(図3-1参照)で3000Hz±5Hzに調整する．

5-10 ワウ・フラッタの確認

再生法	WRMS	0.03%以下	MTT-111使用
録再法	RMS	0.15%以下	MTT-502使用

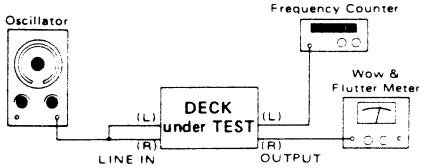


Fig. 5-9

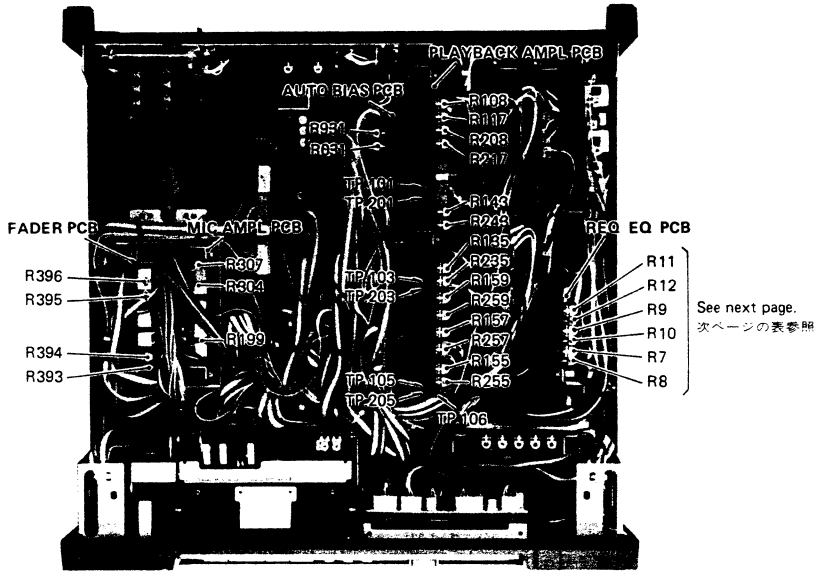
5-11 ダンパーの調整

ダンパー調整ネジ(図3-3参照)でダンパーが開くまでの時間を0.5～1秒に調整する．
調整時カセット・カバーは装着状態とし，カセット・ハーフは装着しない．

6 ELECTRICAL CHECKS AND ADJUSTMENTS

アンプ部の確認と調整

6-1 ADJUSTMENT POINTS 調整個所



PLAYBACK AMPL PCB

R108/R208	Playback equalization	再生イコライザ
R117/R217	Playback level	再生レベル
R135/R235	Playback dolby level	再生ドルビー・レベル
R143/R243	Meter level (TAPE)	メータ・レベル(TAPE)
R155/R255	Meter level (CAL)	メータ・レベル(CAL)
R157/R257	Source level (DOLBY)	ソース・レベル(DOLBY)
R159/R259	Source level (dbx)	ソース・レベル(dbx)

MIC AMPL PCB

R199/–	Master balance (Lch only)	マスター・バランス(Lchのみ)
R304/–	Output balance (Lch only)	アウトプット・バランス(Lchのみ)
R307/–	Phones balance (Lch only)	ホーン・バランス(Lchのみ)

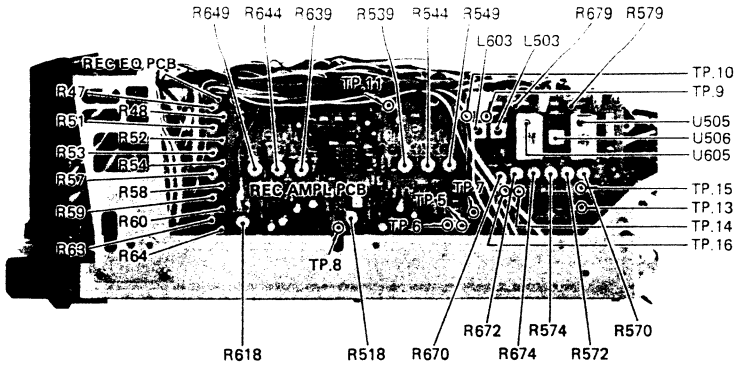
FADER PCB

R393/R394	Source level	ソース・レベル
R395	Fade in time	フェート・イン時間
R396	Fade out time	フェート・アウト時間

AUTO BIAS PCB

R931/R031	Auto CAL level	オート・キャリブレーション・レベル

Fig. 6-1



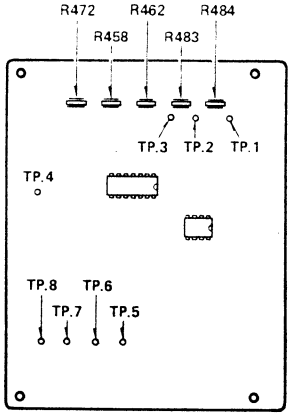
REC AMPL PCB

U505/U605	Bias ampl offset			バイアス・アンプ・オフセット	
U506	Bias frequency			バイアス周波数	
R518/R618	Rec ampl standard voltage			録音アンプ基準電圧	
R539/R639	Rec EQ NORMAL	6.3 kHz		イコライザ NORMAL	6.3 kHz
R544/R644	Rec EQ CrO_2			イコライザ CrO_2	
R549/R649	Rec EQ METAL			イコライザ METAL	
R574/R674	Bias osc offset			バイアス発振器オフセット	
R579/R679	Bias NORMAL			バイアス NORMAL	
R572/R672	Bias CrO_2			バイアス CrO_2	
R570/R670	Bias METAL			バイアス METAL	
L503/L603	Bias trap			バイアス・トラップ	

REC EQ PCB

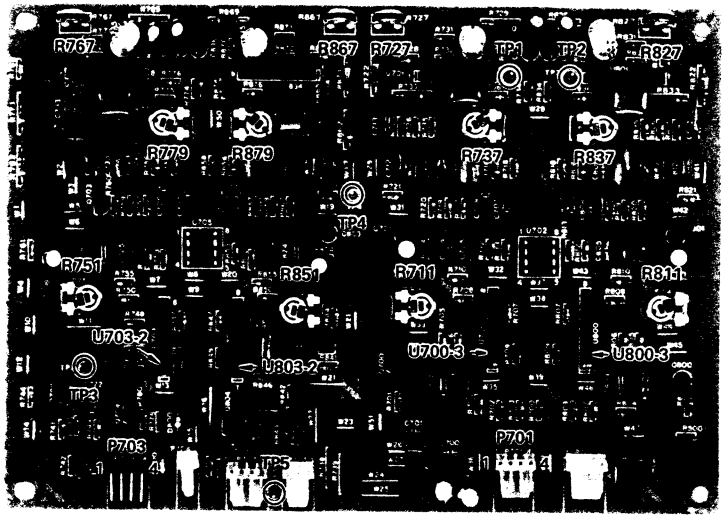
R7/R8	Rec level NORMAL	See Fig. 6-1	録音レベル NORMAL	図6-1参照
R9/R10	Rec level CrO_2		録音レベル CrO_2	
R11/R12	Rec level METAL		録音レベル METAL	
R47/R48	Rec EQ NORMAL	12.5kHz	イコライザ NORMAL	12.5 kHz
R53/R54	Rec EQ CrO_2		イコライザ CrO_2	
R59/R60	Rec EQ METAL		イコライザ METAL	
R51/R52	Rec EQ NORMAL	18 kHz	イコライザ NORMAL	18 kHz
R57/R58	Rec EQ CrO_2		イコライザ CrO_2	
R63/R64	Rec EQ METAL		イコライザ METAL	

Fig. 6-2



R458	Frequency	周波数
R462	Duty	デューティ
R472	Distortion	歪み
R483/R484	Level	レベル

Fig. 6-3 Test tone PCB



ENCODER (エンコーダ)	Lch/Rch		
	R711/R811	VCA symmetry	VCA シンメトリー
	R727/R827	Nominal level	基準レベル
	R737/R837	RMS symmetry	RMS シンメトリー
DECODER (デコーダ)	R751/R851	VCA symmetry	VCA シンメトリー
	R767/R867	Nominal level	基準レベル
	R777/R877	RMS symmetry	RMS シンメトリー

Fig. 6-4 DBX PCB

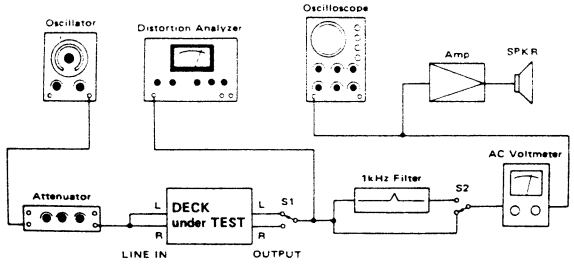


Fig. 6-5 Basic test setup（基本測定接続図）

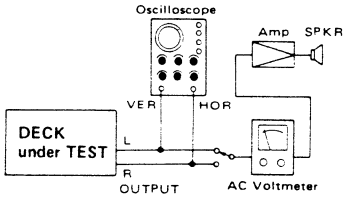


Fig. 6-6 Test setup for azimuth check（位相測定接続図）

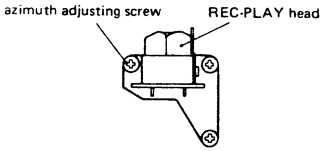


Fig. 6-7 Azimuth screw location（位相調整ネジ）

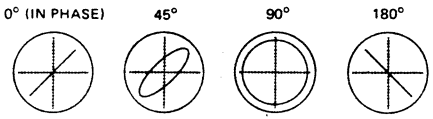


Fig. 6-8 Confirming-phase relationship（位相）

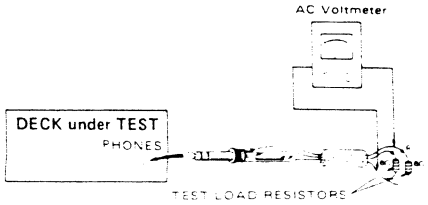


Fig. 6-9 Test setup for PHONES check

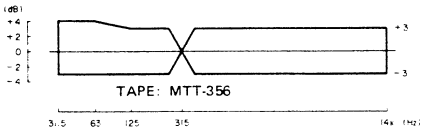


Fig. 6-10 Playback frequency response（再生周波数特性）

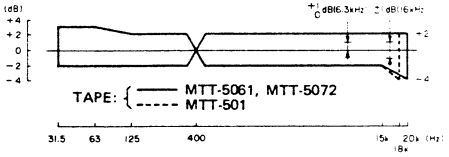


Fig. 6-11 Overall frequency response (NR OUT)（録再周波数特性）

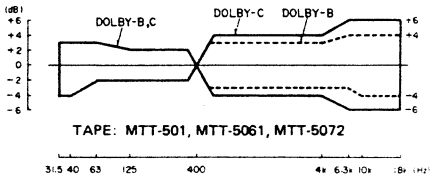


Fig. 6-12 Overall frequency response (DOLBY-B,C)
（録再周波数特性）

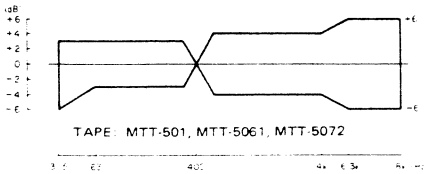


Fig. 6-13 Overall frequency response (DBX)

Fig. 6-14 RMS symmetry adjustment (incorrect)
（RMSシンメトリ調整・不良）

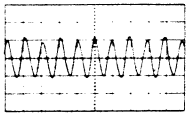


Fig. 6-15 RMS symmetry adjustment (correct)
（RMSシンメトリ調整・良）

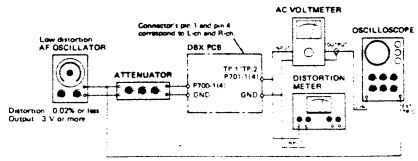


Fig. 6-16 Encoder adjustment setup（エンコーダ調整時の接続）

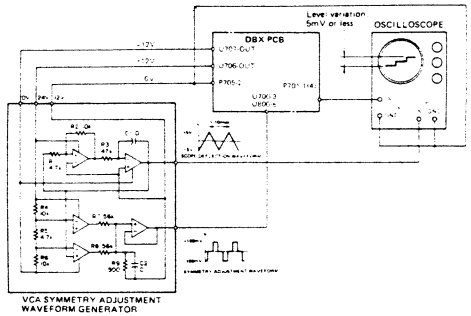


Fig. 6-17 VCA symmetry adjustment setup (encoder)（VCAシンメトリ調整時の接続（エンコーダ））

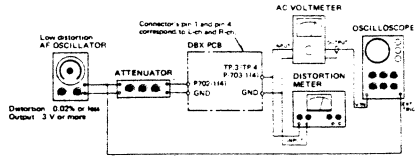


Fig. 6-18 Decoder adjustment setup（デコーダ調整時の接続）

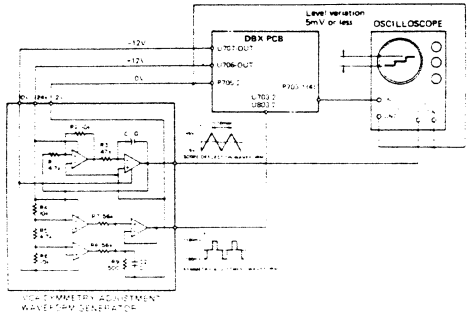


Fig. 6-19 VCA symmetry adjustment setup (decoder)

Z-7000

PRECAUTIONS

1. Since this deck has an automatic tape selector, be sure to use test tapes that have tape position detecting holes. When using test tapes without such holes, please perform measurements after having fixed EQ70 μsec detection switch (CrO_2, METAL) and the METAL position switch on the MECHANISM PCB in the necessary position with adhesive tape etc.
2. Before performing adjustments and checks, clean and demagnetize the entire tape path.
3. Make sure the deck is properly set for the voltage in your locality.
4. In general, adjustments and checks are made in the order of L-ch then R-ch. Double REF. Nos. and test point designations indicate L-ch/R-ch. (Example: R101/R201)
5. 0 dB is referenced to 0.775 V. If an AC voltmeter that references 0 dB to 1 V is used, appropriate compensation should be made.
6. The AC voltmeter used in the procedures must have an input impedance of 1MΩ or more.
7. Note the "deck settings" at the top of each chart. The settings apply to all checks for a specific chart unless explicitly stated otherwise.

6-2 PLAYBACK PERFORMANCE

Deck settings:
MONITOR sw : TAPE
NR SYSTEM sw : OUT

TEAC test tapes:
MTT-150: For Dolby level calibration
MTT-356: For playback frequency response check for METAL,
MTT-501: For S/N check with NORMAL
MTT-5061: For S/N check with CrO_2

Adjustment and test points without special mention refer to PLAYBACK AMPL PCB

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
1. REC-PLAY head azimuth	Connection: Fig. 6-6	MTT-150	Check	OUTPUT: Phase: within 45°	Refer to Fig. 6-8
		MTT-356 (12.5 kHz)	Azimuth screw of R.P head (Fig. 6-7)	OUTPUT: Max. output at L-& R-ch's (on VTVM)	
2. Max. output level	Same as above	MTT-150	R117/R217	TP.101/TP201 580 mV (-2.5 dB)	
	NR SYSTEM: DOLBY		R135/R235	TP.101/TP201 580 mV (-2.5 dB)	OUTPUT: +1 dB ± 1 dB
3. Specified output level	Connection: Fig. 6-6 NR SYSTEM: OUT	MTT-150	OUTPUT cont.	OUTPUT R: -5 dB (436 mV)	Prior to L-ch
			R304 (on MIC AMPL. PCB)	OUTPUT L: -5 dB ± 0.5 dB (308 mV to 615 mV)	
	IMPORTANT: Do not touch OUTPUT cont. during later checks.				
4. PEAK PROGRAM LEVEL METER	Same as above MONITOR: CAL	MTT-150	R155/R255	PEAK PROGRAM LEVEL METER: 0 dB	
	MONITOR: TAPE		R143/R243		
5. Frequency response	Same as above MONITOR: CAL	MTT-356	R108/R208	Nearly equal output level (±1.5 dB) at both frequencies	Refer to Fig. 6-10
	EQ 70 μsec detector switch: 120 μsec (NORMAL)		Check	OUTPUT: At 10 kHz should be approx.4.5dB higher than measured in above step.	
6. Signal-to-noise ratio	Same as above STOP mode Short circuit between TP.106 & GND to release playback muting	MTT-501	Check	OUTPUT: S/N 48 dB min (NORMAL)	
		MTT-5062	Check	OUTPUT: S/N 52 dB min (CrO_2)	

6-3 MONITOR PERFORMANCE

Deck setting:
MONITOR sw : SOURCE

Adjustment and test points without special mention refer to PLAYBACK AMPL PCB. (See fig. 6-1)

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
7. Min. LINE input level	INPUT sw: LINE REC PRESET LEVEL cont: Max MASTER cont: MAX	LINE IN: 400 Hz/-19dB (86.9 mV)	R393/R394 (on FADER PCB)	TP: 101/TP. 201: 580 mV (-2.5 dB)	
	" REC/PLAY mode		R159/R259	TP.103/TP.203 580 mV (-2.5 dB)	
	" NR SYSTEM: DOLBY		R157/R257	TP.105/TP.205 387.5 mV (-6 dB)	
8. Min. MIC input level	INPUT sw: MIC NR SYSTEM: OUT	MIC: 400 Hz/-67 dB (347 μV)	Check	OUTPUT: -5 dB ± 3 dB (308 mV to 615 mV)	
9. Specified LINE input level	INPUT sw: LINE	LINE IN: 400 Hz/-9 dB (275 mV)	REC PRESET LEVEL cont.	OUTPUT: 0 dB (0.775 V)	
			MASTER cont.	OUTPUT R: -5 dB (436 mV)	Prior to R-ch
			R199 (on MIC AMPL PCB)	OUTPUT L: -5 dB ± 0.5 dB (411 mV to 461mV)	TP.103/TP.203 580 mV ± 20 mV
	IMPORTANT: Do not touch REC PRESET LEVEL cont. and MASTER cont. during later checks.				
10. PEAK PROGRAM LEVEL METER	INPUT sw: LINE	LINE IN: 400 Hz/-9 dB (275 mV)	Check	PEAK PROGRAM LEVEL METER: 0 dB	
11. PHONES output level	INPUT sw: LINE Connection: Fig. 6-9 PHONES cont: MAX	LINE IN: 400 Hz/-9 dB (275 mV)	Check	PHONES: +1 dB ± 2 dB (690 mV to 869 mV)	
			PHONES cont.	PHONES R: -5 dB (436 mV)	8 Ω load
			R307 (on MIC AMPL, PCB)	PHONES L: -5 dB ± 1.5 dB (367 mV to 518 mV)	

6-4 RECORDING PERFORMANCE

Deck settings:
MONITOR sw: TAPE
NR SYSTEM sw: OUT
OUTPUT cont: Specified position (item 3)
REC PRESET LEVEL cont: Specified position (item 9)
MASTER cont: Specified position (item 9)
INPUT sw: LINE

TEAC test tapes:
MTT-5072: For METAL record test
MTT-5061: For CrO_2 record test
MTT-501: For NORMAL record test

Adjustment and measuring points without special mention refer to REC AMPL PCB. (See fig. 6-2)

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
12. Record amp standard voltage adjustment	REFERENCE MTT-5072	——	R518/R618	TP. 5/TP. 6: 3.00 V_{DC}	
			R570/R670	TP. 15/TP. 16: 16V_{DC}	
13. Osc. unit frequency adjustment	REC/PLAY mode MTT-5072	No signal	U506	Osc. frequency: 100.0 kHz	

Adjustment and measuring points without special mension refer to REC AMPL PCB. (See fig. 6-2)

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
14. Bias ampl. adjustment	REC/PLAY mode	No signal	U505/U605	TP. 13-TP. 15/TP. 14-TP. 16: (R577/R677 at both ends) Min. DC voltage	
15. Bias trap	REC/PLAY mode MTT-5072	No signal	L503/L605	TP. 9/TP.10: Min. bias leak	
16. Record bias	REC/PLAY REFERENCE MTT-501	LINE IN: 6.3 kHz/–39 dB (8.69 mV)	R574/R674	TP. 13/TP. 14 6.3 V_{DC}	
	" MTT-5061		R579/R679	Over-bias value 4 dB	
			R572/R672	Over-bias value 3 dB	
	" MTT-5072		R570/R670	Over-bias value 2 dB	
17. Record level	MTT-501	LINE IN: 400 Hz/–9 dB (275 mV)	R7/R8	Output level (record and playback) –5 dB	R7 ~ R12 on REC EQ PCB
	MTT-5061		R9/R10		
	MTT-5072		R11/R12		
18. Frequency response	MTT-501	LINE IN: 400 Hz & 6.3 kHz alternately/–39 dB (8.69 mV)	R539/R639	OUTPUT: Equal level at both frequencies	
	MTT-5061		R544/R644		
	MTT-5072		R549/R649		
	MTT-501	LINE IN: 400 Hz & 12.5 kHz alternately/–39 dB (8.69 mV)	R47/R48	OUTPUT: Equal level at both frequency	on REC EQ PCB
	MTT-5061		R53/R54		
	MTT-5072		R59/R60		
	MTT-501	LINE IN: 400 Hz & 18 kHz alternately/–39 dB (8.69 mV)	R51/R52	OUTPUT: Equal level at both frequency	
	MTT-5061		R57/R58		
	MTT-5072		R63/R64		
			Check	Overall frequency response Figs. 6-11 to 6-13	
19. Total harmonic distortion	MTT-501 MTT-5061 MTT-5072	LINE IN: 400 Hz/–9 dB (275 mV)	Check	OUTPUT: 3.5% or less with NORMAL 2.0% or less with METAL, CrO_2 When NR SYSTEM is set to dbx, below 1% for all tape positions.	
20. Signal-to-noise ratio	"	LINE IN: 400 Hz/–9 dB (275 mV) ↓ no signal	Check	OUTPUT: NORMAL 45dBmin. CrO_2 48dBmin. METAL 48dBmin.	
21. Erase efficiency	• Connection is same as in Fig. 6-5, but engage 1-kHz filter. • Record a 1-kHz signal. Reqind tape to midpoint of recorded portion. Record a "no signal" portion. Find the difference between the 1-kHz portion and the "no signal" portion.				
	MTT-5072	LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal	Check	OUTPUT: 65 dB min. ratio	

Adjustment and measuring points without special mention refer to REC AMPL PCB. (See fig. 6-2)

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
22. Channel separation	• Connection Fig. 6-5, but do not connect LINE IN (R), and engage 1-kHz filter. • Set the deck to record mode. Find the difference between the 1-kHz recorded portion (L-ch) and the "no-signal" portion (R-ch). Then change the connection and check reverse operation.				
	MTT-5061	LINE IN: L-ch 1 kHz/–9 dB (275 mV) R-ch No signal	Check	OUTPUT: 35 dB min. ratio	
23. Adjacent track crosstalk	• Connection: Fig. 6-5, but do not connect LINE IN (L) and OUTPUT (L). • Record a 125-Hz signal on R-ch and note output level. Invert tape and play R-ch track. Check leakage level against the output reference of previously recorded portion.				
	MTT-5061	LINE IN: L-ch No signal R-ch 125 Hz/–9 dB (275 mV)	Check	OUTPUT: 45 dB min. ratio	
24. REC MUTE function	• Connection: Fig. 6-5, but engage 1-kHz filter. • Record a 1-kHz signal. Push REC MUTE button for several seconds. (At this time, make sure LED on the button lights). Rewind and play the tape. Find the difference between the 1-kHz portion and the "no-signal" portion.				
	MTT-5061	LINE IN: 1 kHz/+1 dB (0.859 V) ↓ no signal	Check	OUTPUT: 65 dB min. ratio	
25. Dolby NR effect (B-type)	• Record a 1-kHz signal with NR SYSTEM switch OUT. Play this portion with NR SYSTEM switch set first to OUT, then to □□B. Obtain the difference in output level between OUT and □□B positions. Repeat the above process using a 10-kHz signal.				
	MTT-5061	LINE IN: 1 kHz/–29 dB (27.5 mV)	Check	OUTPUT: Variation 3 dB ~ 8 dB	
		LINE IN: 10 kHz/–39 dB (8.69 mV)	Check	OUTPUT: Variation 8 dB ~ 10 dB	
26. Dolby NR effect (C-type)	• Repeat the same procedure as above, only see that the NR SYSTEM switch is set to □□C.				
	MTT-5061	LINE IN: 1 kHz/–39 dB (8.69 mV)	Check	OUTPUT: Variation 16 dB ~ 20 dB	
		LINE IN: 10 kHz/–49 dB (2.75 mV)	Check	OUTPUT: Variation 16 dB ~ 20 dB	

6-5 DBX PERFORMANCE

Note:
- Test DBX performance only after you are sure that the "6-7 DBX PCB ADJUSTMENT" is correct.
- TP.101/TP.201, TP.103/TP.203: on PLAYBACK AMPL. PCB (Fig. 6-1)

Others: DBX PCB (Fig. 6-4)

DECK settings:
MONITOR sw: TAPE
MASTER & REC PRESET LEVEL cont: Specified position (item 9)
NR SYSTEM sw: dbx
OUTPUT cont: Specified position (item 3)
INPUT sw: LINE

TEAC test tape:
MTT-5072: For METAL record test

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
27. Encoding level	REC/PLAY mode MTT-5072	LINE IN: 400 Hz/–14.5 dB (146 mV)	Check	TP.103/TP.203 –8.2 dB (300 mV)	
	If, in the above step, the result is not within specifications, adjust using the MASTER and REC PRESET LEVEL controls so that the correct value is obtained when the controls are in the specified positions (item 9).				
	REC/PLAY mode MTT-5072	LINE IN: 400 Hz/–14.5 dB (146 mV)	R727/R827	P701-1/P701-4 on DBX PCB: –8.2 dB (300 mV)	
28. Decoding level	Record a 400 Hz signal with NR SYSTEM switch OUT. Rewind and play the recorded portion. Note the off-the-tape level from OUTPUT. . .(1). Repeat the above process with NR SYSTEM switch set to dbx. Note the off-the-tape level. . .(2). Compare the difference between (1) and (2). If ±1 dB or more, correct with R727/R827 using (1) as reference.				
	REC/PLAY mode MTT-5072	LINE IN: 400 Hz/–14.5 dB (146 mV)	Check	P702-1/P702-4 on DBX PCB: –8.2 dB (300 mV)	
			R767/R867	TP.101/TP.201: –8.2 dB (300 mV)	
29. dbx DISC	STOP mode MONITOR sw: SOURCE NR SYSTEM sw: OUT INPUT sw: dbx DISC	LINE IN: 400 Hz/–14.5 dB (146 mV)	Check	OUTPUT: –10.5 dB ± 2 dB (184 mVto 291 mV)	
		LINE IN: 20 Hz/–14.5 dB (146 mV)	Check	OUTPUT: –22.5 dB ± 3 dB (41.1 mV to 82 mV)	

6-6 TEST TONE OSC. ADJUSTMENT

Adjustment and measuring points refer to TEST TONE PCB. (See fig. 6-4)

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
30. Frequency adj.	TP. 4 ⟷ TP. 3 Shortcircuit TP. 6 ⟷ TP. 4 Shortcircuit	—	R458	TP. 2 or TP. 1: 6.3 kHz	TP.3: GND
31. Distortion	"	—	R462	TP. 2 or TP. 1: Min distortion (Less than 3%)	Duty
			R472		Distortion
32. Frequency adj. (Re-adjust.)	"	—	R458	TP. 2 or TP. 1: 6.3 kHz	Test tone 2
33. Frequency check	TP. 4 ⟷ TP. 3 Shortcircuit TP. 5 ⟷ TP. 3 Shortcircuit	—	Check	TP. 2 or TP. 1: 315 Hz±10%	Test tone 1
	TP. 4 ⟷ TP. 3 Shortcircuit TP. 7 ⟷ TP. 3 Shortcircuit			TP. 2 or TP. 1: 7.5 kHz±10%	Test tone 3
	TP. 4 ⟷ TP. 3 Shortcircuit TP. 8 ⟷ TP. 3 Shortcircuit			TP. 2 or TP. 1: 16 kHz±10%	Test tone 4
34. Output level	TP. 4 ⟷ TP. 3 Shortcircuit TP. 6 ⟷ TP. 3 Shortcircuit	—	R483/R484	TP. 2/TP. 1: –31.0 dB	

Z-7000

6-7 AUTO CALIBRATION PERFORMANCE

- Be sure to use tapes that have tape position detecting holes and whose record protect tabs are in place.
- Curled or old tapes etc. are not suited for auto calibration.
- Unless otherwise specified, the switches and LEDs refered to are on the right side of the front panel.

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
35. Tape set	MTT-5072	—	—	The "METAL" Display indicator and TAPE TYPE display light up.	
				"REFERENCE" and "STD" (MOL BALANCE) light.	
36. AUTO CAL Stand-by 1	Press the AUTO CAL button	—	—	"REFERENCE" goes out, "AUTO CAL" lights up	
				"LOW", "STD" and "HIGH" (MOL BALANCE) start blinking	
37. AUTO CAL Stand-by 2	Press either LOW, STD or HIGH MOL BALANCE button while their LEDs are blinking.	—	—	The LED of the selected switch stay on while the LEDs of the other switches go out.	
				The RECORD button LED blinks.	
	If neither LOW, STD or HIGH have been pressed, STD is automatically chosen.				
38. AUTO CAL begins	Press RECORD button while RECORD LED is blinking.	—	—	After entering F.FWD mode for about 1 sec, REC/PLAY mode is entered and auto calibration performed.	
39. AUTO CAL procedure	—	—	—	AUTO CAL process 1. Bias setting Test tone 2 2. Level setting Test tone 1 3. EQ 1 setting Test tone 3 4. EQ 2 setting Test tone 4 5. EQ 1 recheck Test tone 3 6. EQ 2 recheck Test tone 4	
40. AUTO CAL complete	—	—	—	If auto calibration was successful, "OK" lights up.	
				If auto calibration up to EQ 1 was successful, while EQ 2 was not possible, "OK" first blinks and then stays on. In this case, check 6-6 again	
				Transport enters REW and then PLAY mode, bringing the tape back to the position where auto calibration started, stops and enters REC/PAUSE mode.	
41. Sensitivity adjustment	Using metal tape (MTT-5072), perform STD position auto calibration.	—	Check	"OK" should be displayed	
	After performing above auto calibration, record and reproduce the signal.	LINE IN 400 Hz/–39 dB (8.69 mV)	R931/R031 (on AUTO BIAS PCB)	OUTPUT Record and reproduce the signal. While switching between SOURCE and TAPE with the MONITOR switch, adjust so that the output level remains the same.	
			• When TAPE output is low, turn R931/R031 to the left. • When TAPE output is high, turn R931/R031 to the right.		
42. Sensitivity check	MTT-501 MTT-5061 MTT-5072	LINE IN 400 Hz/–9 dB (275 mV)	Check	Using each type of tape, check as above for LOW, STD and HIGH respectively. Difference in sensitivity should be within ±1 dB.	
43. Frequency response check	MTT-501 MTT-5061 MTT-5072	LINE IN –39 dB (8.69 mV)	Check	After performing auto calibration for every type of tape (LOW, STD and HIGH respectively), check that record/playback frequency characteristics are within the range shown in fig. 6-11 to 6-13.	

6-8 AUTO FADER PERFORMANCE

R395, R396: on the FADER PCB. (See fig. 6-1)

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
44. FADE IN	FADE IN cont: MAX MONITOR sw: TAPE REC/PAUSE mode	LINE IN 400 Hz/–9dB (275 mV)	Check	Meter reading	–40dB
			R395 (on FADER PCB)	OUTPUT Check that output level reaches –5dB within 10~12 sec after placing the deck in REC/PLAY mode by pressing the PLAY button.	
			Check	Meter reading Check that the meter gradually reaches 0dB from –40dB.	
	FADE IN cont: MAX MONITOR sw: SOURCE REC/PAUSE mode		Check	Meter reading REC/PAUSE 0dB After starting REC/PLAY mode by pressing the PLAY button, the level should be –40dB, then gradually return to 0dB.	
45. FADE OUT	FADE OUT cont: MAX AUTO SPACE cont: MIN MONITOR sw: SOURCE REC/PLAY mode	LINE IN 400 Hz/–9dB (275 mV)	R396 (on FADER PCB)	The time between pressing REC MUTE button and entiring REC/PAUSE mode should be 12~14 sec.	
			Check	Meter reading Check that the reading changes gradually from 0dB to –40dB. On entiring REC/PAUSE mode, it should return to 0dB.	
46. AUTO SPACE	FADE OUT cont: MIN AUTO SPACE cont: MAX REC/PLAY mode	—	Check	Check that the time between pressing the REC/MUTE button and entiring REC/PAUSE mode is 10~14 sec.	
	FADE OUT cont: MIN AUTO SPACE cont: MAX REC/PLAY mode AUTO SPACE cont: MIN		Check	Check that the time between pressing the REC/MUTE button and entiring REC/PAUSE mode is 1~3 sec.	

6-9 DBX PCB ADJUSTMENT

Note:
Since the DBX PCB assembly has been precisely adjusted at the factory, this adjustment is not usually needed unless any of the trimmers have been changed, or any components on the PCB have sustained damage.

6-9-1 PREPARATION

1. Disconnect all connectors on the DBX PCB, except for J704/P704 and J705/P705. Turn the deck OFF to prevent accidental damage when disconnecting or reconnecting.
2. Make the following initial settings.
   - POWER switch: ON (for supplying power via the connector to the DBX PCB).
   - NR SYSTEM switch: OUT
   - DBX PCB trimmers: Approximate center positions

   All other front panel switches and controls have no effect on this adjustment.

6-9-2 ENCODING ADJUSTMENT

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
1. RMS SYM	Fig. 6-16	P700-1/P700-4 100 Hz/–8.2 dB (300 mV)	R737/R837	TP.1/TP.2: Clean 200 Hz sine-wave	Refer to Figs. 6-14 and 6-15.
2. Encoding level	Fig. 6-16	P700-1/P700-4 400 Hz/–8.2 dB*1 (300 mV)	R727/R827	P701-1/P701-4: –8.2 dB*2 (300 mV)	*1 Reference 1 *2 Reference 2
3. VCA SYM	Fig. 6-17	U700-3/U800-3	R711/R811	P701-1/P701-4: A relatively straight horizontal line on the 'scope face'. (Level variation: 5 mV or less)	
4. Encoding single frequency response	Fig. 6-16	P700-1/P700-4 100 Hz/–8.2 dB (300 mV)	Check	P701-1/P701-4: +0.2 dB ± 0.5 dB against Ref.2 (290 mV ~ 325 mV)	
		P700-1/P700-4 10 kHz/–8.2 dB (300 mV)	Check	P701-1/P701-4: –3.3 dB ± 0.5 dB against Ref.2 (194 mV ~ 217 mV)	
5. Encoding operation level	Fig. 6-16	P700-1/P700-4 400 Hz/–68.2 dB*1 (300 μV)	Check	P701-1/P701-4 –30 dB ± 0.5 dB against Ref.2 (8.96 mV ~ 10.1 mV)	*3 –60 dB against Ref.1
		P700-1/P700-4 400 Hz/+11.8 dB*4 (3.00 V)	Check	P701-1/P701-4: +10 dB ± 0.5 dB against Ref.2 (0.896 V ~ 1.01 V) Distortion: 0.3% or less	*4 +20 dB against Ref.1

7-9-3 DECODING ADJUSTMENT

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
6. RMS SYM	Fig. 6-18	P702-1/P702-4 100 Hz/–8.2 dB (300 mV)	R777/R877	TP.3/TP.4: Clean 200 Hz sine-wave	Refer to Figs. 6-14 and 6-15.
7. Encoding level	Fig. 6-18	P702-1/P702-4 400 Hz/–8.2 dB*1 (300 mV)	R767/R867	P703-1/P703-4: –8.2 dB*2 (300 mV)	*1 Reference 1 *2 Reference 2
8. VCA SYM	Fig. 6-19	U703-2/U803-2	R751/R851	P703-1/P703-4: A relatively straight horizontal line on the 'scope face'. (Level variation: 5 mV or less)	
9. Decoding single frequency response	Fig. 6-18	P702-1/P702-4 100 Hz/–8.2 dB (300 mV)	Check	P703-1/P703-4: –0.2 dB ± 1 dB against Ref.2 (261 mV ~ 329 mV)	
		P702-1/P702-4 10 kHz/–8.2 dB (300 mV)	Check	P703-1/P703-4: +5.5 dB ± 1 dB against Ref.2 (504 mV ~ 634 mV)	
10. Decoding operation level	Fig. 6-18	P702-1/P702-4 400 Hz/–38.2 dB*3 (9.49 mV)	Check	P703-1/P703-4: –60 dB ± 1 dB against Ref.2 (267 μV ~ 337 μV)	*3 –30 dB against Ref.1
		P702-1/P702-4 400 Hz/+1.8 dB*4 (0.949 V)	Check	P703-1/P703-4 +20 dB ± 1 dB against Ref.2 (2.67 V ~ 3.37 V)	*4 +10 dB against Ref.2

準備

1. 本機はオートセレクタ自動検出機構になっていますので、テスト・テープは必ずテープ・ポジション検出孔のあるものを使用して下さい。もし検出孔のないテスト・テープを使用するときは、メカニズムPCB(1)のEQ70μsec検出スイッチ(CrO₂, METAL)およびMETALポジション・スイッチを接着テープ等で各の位置に固定して測定してください。
2. アンプ部の調整の前に、消去ヘッド、録・再ヘッド、テープ走行部分それぞれを充分清掃し、クリーナ液で清掃して下さい。
3. 特に指示の有る場合を除き、Lch, Rchの順に調整を行なって下さい。
4. レベル計は入力インピーダンス1MΩ以上のものを使用して下さい。
5. 0dB＝0.775V
6. 調整に際して各スイッチを次のように設定して下さい。

MEMORY	OFF
TAPE LENGTH	任意 (C-60)
MONITOR	TAPE
NR SYSTEM	OUT
INPUT	LINE
TIMER	OUT
PITCH CONT	OFF
REFERENCE	

表 1

6-2 再生系

特記無き調整個所及びTPはPLAYBACK AMPL PCB (図6-1参照)

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
1. ヘッド・アジマス調整	設定 表1参照 OUTPUTつまみ: MAX	MTT-150	チェック	位相 45°以内	図6-8参照
		MTT-356 (12.5kHz/8分)	ヘッドのアジマス調整ネジ	L, R共最大出力 (10kHz位相90°以内)	図6-7参照
2. 最大出力レベル	同上	MTT-150	R117 R217	TP.101 TP.201 580mV(−2.5dB)	
	NR SYSTEM: DOLBY B	MTT-150	R135 R235	TP.101 TP.201 580mV(−2.5dB)	OUTPUT −1dB±1dB
3. 規定出力レベル	同上 NR SYSTEM: OUT	MTT-150	OUTPUTつまみ	OUTPUT R: −5dB	Rch優先
			R304 [MIC AMPL]	OUTPUT L: −5dB±0.5dB	
4. メータ・レベル・セット	同上 MONITOR: CAL	MTT-150	R155 R255	ピーク・プログラム・レベル・メータ: 0dB点灯	
	同上 MONITOR: TAPE		R143 R243		
5. 再生周波数特性	同上 MONITOR: CAL	MTT-356	R108 R208	315Hzと10kHzの出力がほぼ等しく(±1.5dB)なるよう調整 規格: 図6-10参照	
	EQ 70μsec検出スイッチ: 120μsec(NORMAL)		チェック	10kHzの出力が約4.5dB高くなること	
6. 再生S/N	同上 モード: STOP	MTT-501	チェック	S/N 48dB以上	P.B.AMPL PCBのTP.106をGNDに接続して再生ミューティングを解除する
		MTT-5072	チェック	S/N 52dB以上	

6-3 モニタ系

・MONITORスイッチ: SOURCE
・特記無き調整個所及びTPはPLAYBACK AMPL PCB (図6-2参照)

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
7. LINE最小入力レベル	INPUTスイッチ: LINE REC PRESET LEVELつまみ: 最大 MASTERつまみ: MAX	LINE IN 400Hz/−19dB	R394 R394 [FADER PCB]	TP.101 TP.201 580mV(−2.5dB)	
	同上 モード: REC PLAY		R159 R259	TP.103 TP.203 580mV(−2.5dB)	
	同上 NR SYSTEM DOLBY B		R157 R257	TP.105 TP.205 387.5mV(−6dB)	OUTPUT: −5dB±1dB
8. MIC最小入力レベル	INPUTスイッチ: MIC NR SYSTEM: OUT	MIC 400Hz/−67dB	チェック	OUTPUT: −5dB±3dB	
9. LINE規定入力レベル	INPUTスイッチ: LINE	LINE IN 400Hz/−9dB	REC PRESET LEVELつまみ	OUTPUT: 0dB	
			MASTERつまみ	OUTPUT R: −5dB	Rch優先
			R199 [MIC AMPL]	OUTPUT L: −5dB±1.5dB	TP.103/TP.203 580mV±20mV
10. メータ・レベル・チェック	同上	LINE IN 400Hz/−9dB	チェック	ピーク・プログラム・レベル・メータ 0dB点灯	
11. PHONES 出力レベル・チェック	PHONESつまみ: MAX	LINE IN 400Hz −9dB	チェック	PHONES −1dB±2dB	8Ω 負荷
			PHONESつまみ	PHONES R: −5dB	
			R307 [MIC AMPL]	PHONES L: −5dB±1.5dB	

6-4 録音系

特記無き調整個所及び測定個所はREC AMPL PCB (図6-2参照)

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
12. 録音アンプ基準電圧調整	テープ MTT-5072 REFERENCE	−	R518 R618	TP.5 TP.6 3.00Vdc	
			R570 R670	TP.15 TP.16 16Vdc	
13. OSC UNIT 発振周波数調整	同上 無信号録音状態	−	U506	バイアス発振周波数 100.0kHz	
14. バイアス・アンプ調整	同上	−	U505 U605	TP.13-15間 TP.14-16間 DC電圧最小	
15. バイアス・トラップ調整	同上	−	L503 L603	TP.9 TP.10 バイアス漏れ最小	
16. バイアス・セット	録音状態 テープ MTT-501 REFERENS	LINE IN 6.3kHz/−39dB	R574 R674	TP.13/TP.14 6.3Vdc	
			R579 R679	4dB ピーク・オーバー	
	同上 テープ MTT-5061		R572 R672	3dB ピーク・オーバー	
	同上 テープ MTT-5072		R570 R670	2dB ピーク・オーバー	
17. 録音レベル・セット	テープ MTT-501	LINE IN 400Hz −9dB	R7 R8	録音・再生した時の出力 −5dB	R7~R12 [REC EQ PCB]
	テープ MTT-5061		R9 R10		
	テープ MTT-5072		R11 R12		

・信号入力：LINE IN
・特記無き調整個所及びTPはREC AMPL PCB（図6-2参照）

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
18. 録再周波数特性	MTT-501	400Hz −39dB 6.3kHz −39dB 繰返し	R539/R639	録再出力 同一レベル	
	MTT-5061		R544/R644		
	MTT-5072		R549/R649		
	MTT-501	400Hz/−39dB 12.5kHz −39dB 繰返し	R47/R48	録再出力 同一レベル	調整個所は REC EQ PCB
	MTT-5061		R53/R54		
	MTT-5072		R59/R60		
	MTT-501	400Hz −39dB 18kHz −39dB 繰返し	R51/R52	録再出力 同一レベル	
	MTT-5061		R57/R58		
	MTT-5072		R63/R64		
	−	−	チェック	録再周波数特性	図6-11, 12, 13
19. 総合歪率	MTT-501	400Hz −9dB	チェック	NORMAL 3.5%以下	NR SYSTEMをdbxとしたとき全テープ・ポジションで1.0%以下
	MTT-5061			CrO_2 2.0%以下	
	MTT-5072			METAL 2.0%以下	
20. 総合S/N	MTT-501	400Hz −9dB	チェック	NORMAL 45dB以上	NR SYSTEM OUT
	MTT-5061			CrO_2 48dB以上	
	MTT-5072			METAL 48dB以上	
21. 消去率チェック	MTT-5072	1kHz −1dB	チェック	録音部分を再生した時のレベルを基準レベルとし、録音部分を消去した時の出力レベルとの差 65dB以上	1kHz B.P.F使用
22. チャネル間セパレーション・チェック	MTT-5061	Lch 1kHz −9dB Rch 無信号	チェック	Lch再生レベルを基準とし、Rchとの出力レベルの差 35dB以上	1kHz B.P.F使用
			LchとRchの信号を入れかえた場合についてもチェックすること		
23. トラック間クロストーク・チェック	同上	Lch 無信号 Rch 125Hz −9dB	チェック	録音されたトラックを再生したときの出力レベルを基準レベルとし、テープを反転して再生したときのRch出力レベルとの差 45dB以上	
24. REC MUTE効果チェック	同上	1kHz +1dB	チェック	1kHzを録音し、途中でREC MUTE釦を押して無信号録音部分を作る。このテープを再生したときの信号部分と無信号部分との出力レベル差 65dB以上(1kHz B.P.F.使用)	
25. ドルビーNR効果チェック (B-TYPE)	同上	1kHz −29dB	チェック	NR SYSTEMスイッチをOUT位置にして信号を録音する。次にこれを再生し、スイッチをOUT→□□Bと切換えた時の出力レベル変化 3dB±3dB	
		10kHz −39dB	チェック	測定法：上と同じ 8dB±10dB	
26. ドルビーNR効果チェック (C-TYPE)	同上	1kHz −39dB	チェック	NR SYSTEMスイッチをOUT位置にして信号を録音する。次にこれを再生し、スイッチをOUT→□□Cと切換えた時の出力レベル変化 10dB±20dB	
		10kHz −49dB	チェック	測定法：上と同じ 16dB±20dB	

6-5 DBX系

R727, R827, R767, R867, P701, P702：DBX PCB（図6-4参照）
TP.103, TP.203, TP.101, TP.201：PLAYBACK AMPL PCB（図6-1参照）

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
27. エンコーダ・レベル・セット	REC PLAY MTT-5072 NR SYSTEM：dbx INPUT：LINE	LINE IN 400Hz −14.5dB	チェック	TP.103 TP.203 −8.2dB	
			R727/R827	P701-1 P701-4 −8.2dB	
28. デコーダ・レベル・セット	同上	LINE IN 400Hz/−14.5dB	チェック	P702-1 P702-4 −8.2dB	
			R767/R867	TP.101 TP.201 −8.2dB	
29. dbx DISCチェック	STOP状態 MONITOR：SOURCE NR SYSTEM：OUT INPUT：dbx DISC	LINE IN 400Hz −14.5dB	チェック	OUTPUT： −10.5dB±2dB	
		LINE IN 20Hz −14.5dB	チェック	OUTPUT： −22.5dB±3dB	

6-6 テスト・トーン発振器調整

調整個所および TP は TEST TONE PCB (図6-3参照)

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
30. 発振周波数調整	TP4↔TP3 ショート TP5↔TP3 ショート		R458	TP2 又は TP1 6.3kHz	TP3はGND
31. 歪率調整	同上		R462	TP2 又は TP1 参考 最小 0.3%以下	DUTY
			R472		DISTORTION
32. 発振周波数再調整	同上		R458	TP2 又は TP1 6.3kHz	テスト・トーン2
33. 発振周波数チェック	TP4↔TP3 ショート TP5↔TP3 ショート	–	チェック	TP2 又は TP1 315Hz±10%	テスト・トーン1
	TP4↔TP3 ショート TP7↔TP3 ショート			TP2 又は TP1 7.5kHz±10%	テスト・トーン3
	TP4↔TP3 ショート TP8↔TP3 ショート			TP2 又は TP1 16kHz±10%	テスト・トーン4
34. 出力レベル調整	TP4↔TP3 ショート TP6↔TP3 ショート	–	R483 R484	TP2, TP1 −31.0dB	

6-7 オート・キャリブレーション系

・テープ種類検出穴があり、誤消去防止爪の折られていないテープを使用すること
・カールしたテープ、古いテープ等ではオート・キャリブレーションできないことがあります
・特に指示の無いスイッチ（LED）はフロントパネル右側のスイッチ部

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
35. テープ・セット	MTT-5072をセット			FL ディスプレイ部及び右側スイッチ部にテープ・タイプ METAL が表示されること	
				REFERENCE 及び MOL BALANCE の STD が点灯	
36. AUTO CAL 待機状態－1	AUTO CAL鉦を押す	–	–	REFERENCE 点灯、AUTO CAL 点灯	
				MOL BALANCE の LOW, STD, HIGH 点滅	
37. AUTO CAL 待機状態－2	MOL BALANCEのLEDが点滅中にLOW, STD, HIGHいずれかを選択し鉦を押す	–	–	選択された鉦の LED は点灯したままとなり、他の鉦の LED は消える	LOW, STD, HIGH とれも押さなかった場合は、自動的に STD が選択される
				RECORD 鉦の LED 点滅	
38. AUTO CAL 開始	LED点滅中にRECORD鉦を押す	–	–	約1秒間 F.FWD モードになった後 REC PLAY モードになり、オート・キャリブレーションを行なう	
39. AUTO CAL 処理	–	–	–	(参考) オート・キャリブレーションの順序 1. バイアス・セット テスト・トーン 2 2. レベル・セット テスト・トーン 1 3. EQ 1 セット テスト・トーン 3 4. EQ 2 セット テスト・トーン 4 5. EQ 1 再チェック テスト・トーン 3 6. EQ 2 再チェック テスト・トーン 4	
40. AUTO CAL 終了				キャリブレーション完了の場合は OK が点灯	
				EQ1まで調整が終了、EQ2が調整出来なかった場合、OK が点滅後点灯する	5-6項再チェック
				ヘッドは REW モードで PLAY モードを経てテープを AUTO CAL 開始位置に戻し、REC PAUSE モードで停止する	

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
41. 感度調整	メタル・テープ(MTT-5072) STD ポジションでオート・キャリブレーションを行なう	–	チェック	OK が表示されること	
	上記オート・キャリブレーション後信号を録音再生する	LINE IN 400Hz −39dB	R931 R031 [AUTO BIAS PCB]	OUTPUT 信号を録音再生し、MONITOR スイッチを SOURCE・TAPE と切換えたとき、出力レベルが同一になるよう調整 ・TAPE出力が低いとき R931 R031を左にまわす ・TAPE出力が低いとき R931 R031を右にまわす	
42. 感度チェック	MTT-501 MTT-5061 MTT-5072	LINE IN 400Hz, −9dB	チェック	各テープで LOW, STD, HIGH それぞれについて前項と同様のチェックを行ない、感度差が±1dB以内であること	
43. 周波数特性チェック	同上	LINE IN −39dB	チェック	各テープで LOW, STD, HIGH それぞれのオート・キャリブレーション後の録再周波数特性が図6-11～13の範囲内であること	

6-8 オート・フェーダ系

調整個所は FADER PCB (図6-1参照)

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
44. フェード・イン調整	FADE IN つまみ: 最大 MONITOR: TAPE モード: REC PAUSE	LINE IN 400Hz −9dB	チェック	メーター指示 −40dB	
			R395	OUTPUT PLAY鉦を押して REC/PLAY モードがスタートしてから出力が−5dB になるまでの時間 10～12秒	
			チェック	メータ指示 −40dBから徐々に 0dB になること	
	FADE IN つまみ: 最大 MONITOR: SOURCE モード: REC PAUSE		チェック	メータ指示 REC PAUSE時 PLAY鉦を押して REC PLAY モードがスタートすると−40dBになり、徐々に 0dB に戻ること	
45. フェード・アウト調整	FADE OUT つまみ: 最大 AUTO SPACE つまみ: 最小 MONITOR: SOURCE モード: REC PLAY	LINE IN 400Hz −9dB	R396	REC MUTE 鉦を押してから REC PAUSE モードになるまでの時間 12～14秒	
			チェック	メータ指示 0dB から徐々に−40dB に変化すること、また REC PAUSE モードになると 0dB に戻ること	
46. オート・スペース動作チェック	FADE OUT つまみ: 最小 AUTO SPACE つまみ: 最大 モード: REC PLAY	–	チェック	REC MUTE 鉦を押してから REC PAUSE モードになるまでの時間 10～14秒	
	同上 AUTO SPACE つまみ: 最小	–	チェック	同上 1～3秒	

6-9 DBX基板単体調整

注1. DBXユニットは通常調整の必要はありません。もし調整する場合は以下の要領で行なって下さい。
注2. DBXユニット及びそのコネクタを外す時は、必ずZ-7000の電源を切ってから行なって下さい。
注3. 調整個所は図6-4を参照して下さい。

6-9-1 エンコーダ調整

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
1. RMS SYM調整	接続 図6-16	P700-1/P700-4 100Hz/300mV	R737/R837	TP.1/TP.2 出力波形が200Hzの正弦波になるよう調整	図6-14, 図6-15参照
2. 基準レベル調整	同上	P700-1 P700-4 400Hz 300mV	R727/R827	P701-1/P701-4 300mV	
3. VCA SYM調整	接続 図6-17	U700-3 U800-3 階段波	R711 R811	P701-1/P701-4 モニタ波形がほぼ一直線(5mV以下)になるよう調整	
4. 周波数特性チェック	接続 図6-16	P700-1 P700-4 100Hz 300mV	チェック	P701-1 P701-4 290mV~325mV	
		同上 10kHz 300mV	チェック	同上 194mV~217mV	
5. エンコード効果チェック	同上	同上 400Hz 300μV	チェック	同上 8.96mV~10.1mV	
		同上 400Hz 3.0V	チェック	同上 0.896mV~1.01V	歪率0.3%以下

6-9-2 デコーダ調整

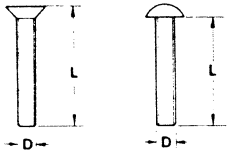
調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
6. RMS SYM調整	接続 図6-18	P702-1 P702-4 100Hz 300mV	R777 R877	TP.3 TP.4 出力波形が200Hzの正弦波になるよう調整	図6-14, 図6-15参照
7. 基準レベル調整	同上	P702-1 P702-4 400Hz 300mV	R767 R867	P703-1/P703-4 300mV	
8. VCA SYM調整	接続 図6-19	U703-2 U803-2 階段波	R751 R851	P703-1/P703-4 モニタ波形がほぼ一直線(5mV以下)になるよう調整	
9. 周波数特性チェック	接続 図6-18	P702-1/P702-4 100Hz/300mV	チェック	P703-1/P703-4 216mV~329mV	
		同上 10kHz/300mV	チェック	同上 504mV~634mV	
10. デコード効果チェック	同上	同上 400Hz/9.49mV	チェック	同上 267μV~337μV	
		同上 400Hz/0.949V	チェック	同上 2.67V~3.37V	

ASSEMBLING HARDWARE CODING LIST

All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted.
ISO screws have the head inscribed with a point as in the figure to the right.

FOR EXAMPLE:

B M 3 x 6
- Nomenclature
- Metric System
- Diameter in mm (D) *
- Length in mm (L)



* Inner dia. for washers and nuts

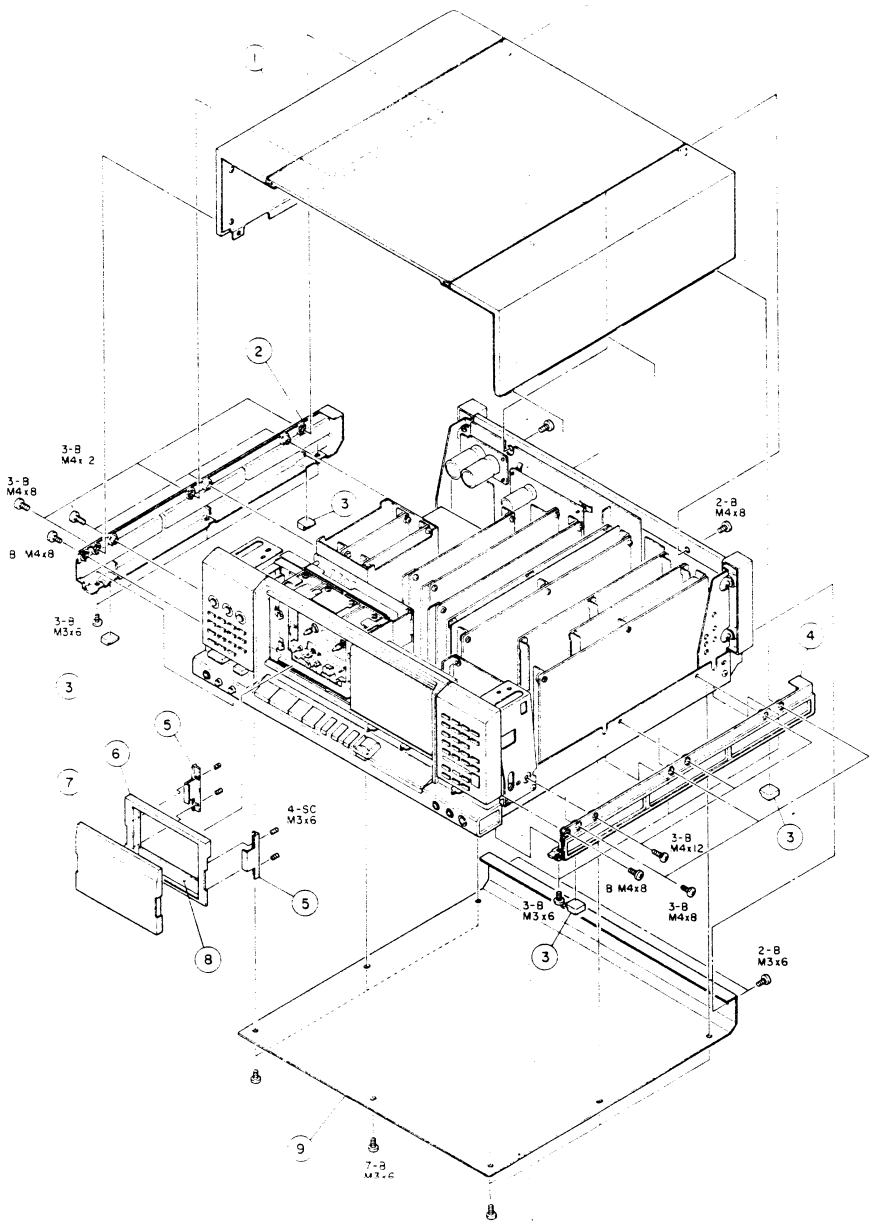
	Code	Name	Type
MACHINE SCREW	R	Round Head Screw	
	P	Pan Head Screw	
	T	Stove Head Screw (Truss)	
	B	Binding Head Screw	
	F	Flat Countersunk Head Screw	
	O	Oval Countersunk Head Screw	
WOOD SCREW	RW	Round Head Wood Screw	
TAPTITE SCREW	PTT	Pan Head Taptite Screw	
	WTT	Washer Head Taptite Screw	
SEMS SCREW	BSA	Binding Head SEMS Screw(A Type)	
	BSB	Binding Head SEMS Screw(B Type)	
	BSF	Binding Head SEMS Screw(F Type)	
	PSA	Pan Head SEMS Screw(A Type)	
	PSB	Pan Head SEMS Screw(B Type)	

	Code	Name	Type
TAPPING SCREW	BTA	Binding Head Tapping Screw(A Type)	
	BTB	Binding Head Tapping Screw(B Type)	
	RTA	Round Head Tapping Screw(A Type)	
	RTB	Round Head Tapping Screw(B Type)	
SETSCREW	SF	Hex Socket Setscrew(Flat Point)	
	SC	Hex Socket Setscrew(Cup Point)	
	SS	Slotted Socket Setscrew(Flat Point)	
WASHER	E	E-Ring (Retaining Washer)	
	W	Flat Washer (Plain)	
	SW	Lock Washer (Spring)	
	LWI	Lock Washer (Internal Teeth)	
	LWE	Lock Washer (External Teeth)	
	TW	Trim Washer (Countersunk)	
NUT	N	Hex Nut	

7 EXPLODED VIEWS AND PARTS LIST

分解図とパーツ・リスト

EXPLODED VIEW-1



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
1 - 1	*5800445300	Cover Assy, Top		
1 - 2	*5800430600	Angle, side; L		
1 - 3	*5800434200	Foot, Rubber; B		
1 - 4	*5800430700	Angle, Side; R		
1 - 5	*5800422900	Holder, Cassette Cover		
1 - 6	*5800429001	Frame, Cassette Cover		
1 - 7	5800422401	Cover, Cassette		
1 - 8	*5800422700	Plate, Cassette Cover; A		
1 - 9	*5800435001	Cover, Bottom		

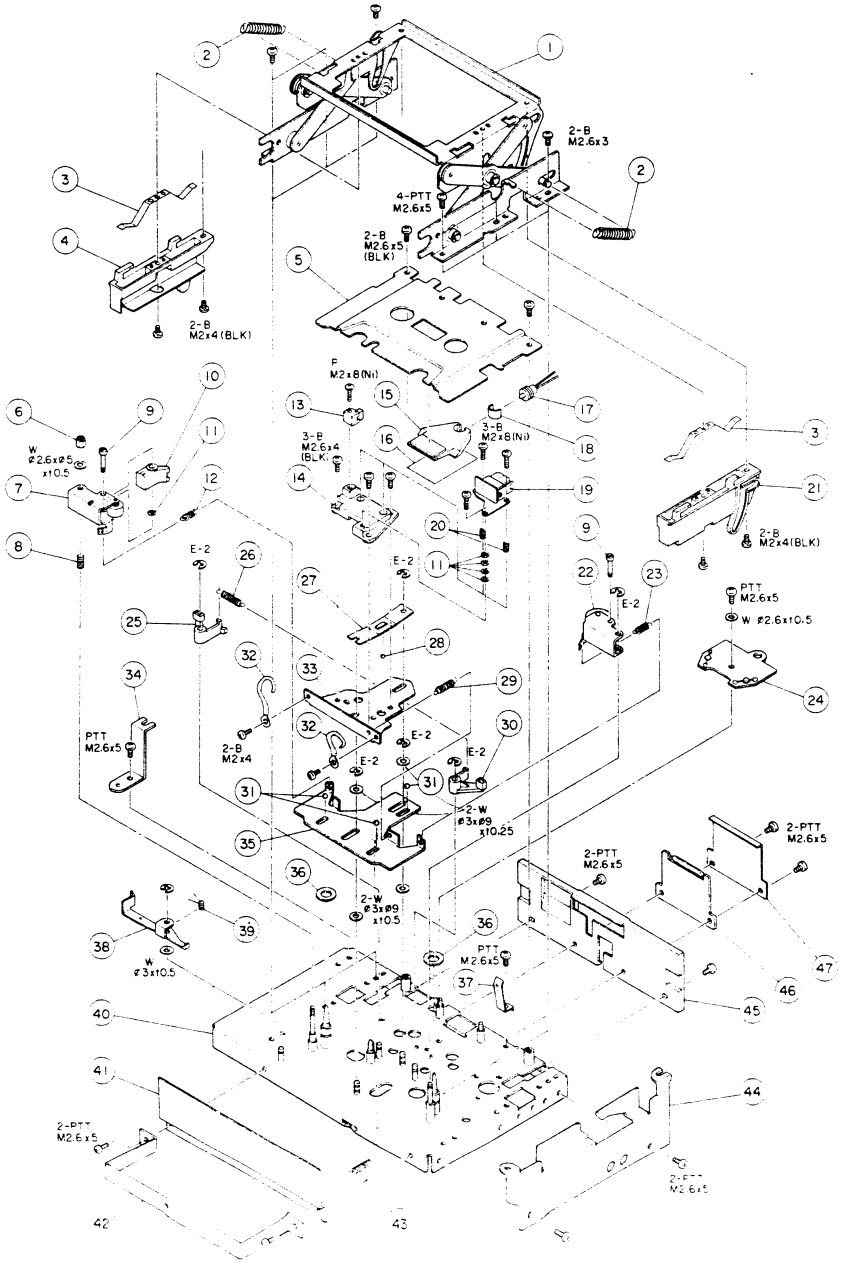
INCLUDED ACCESSORIES

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
	*5700044500	Z-7000 Owner's Manual [J]		
	*5700044700	Z-7000 Owner's Manual [All except J]		
	*5350010900	Cord, In-output		
	*5744033500	Remote Control Unit, RC-200		
	*5347001800	Adaptor, AC [J]		
	*5347001900	Adaptor, AC [US, C]		
	*5347002000	Adaptor, AC [GE]		
	*5347002100	Adaptor, AC [E]		
	*5347002200	Adaptor AC [UK]		
	*5347002300	Adaptor, AC [A]		

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

EXPLODED VIEW–2

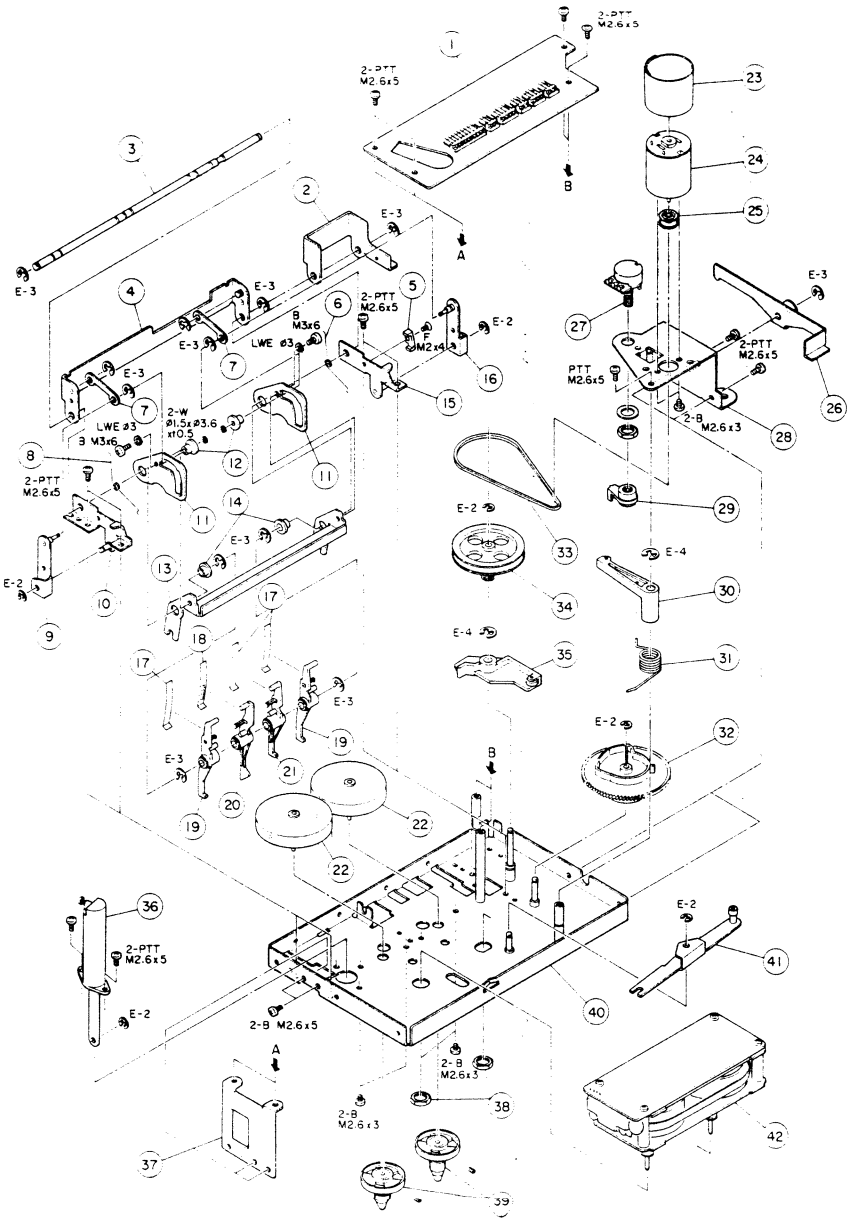


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
2 - 1	*5800436602	Holder Assy, Cassette		
2 - 2	*5800427700	Spring, Eject		
2 - 3	*5800422100	Spring, Cassette Pressure; A		
2 - 4	5800428300	Holder, L		
2 - 5	*5800423100	Panel, Cassette		
2 - 6	*5781952600	Nut, Nylon; M2.6		
2 - 7	5800417800	Pinch Roller Assy, L		
2 - 8	*5800418400	Spring, Arm		
2 - 9	*5800418200	Screw, Adjusting		
2 -10	*5800427900	Guide, Tape		
2 -11	*5800418300	Washer, Wave		
2 -12	*5800418500	Spring, Pinch Roller; L		
2 -13	5378902600	Head, Erase		
2 -14	*5800427800	Stand, Head		
2 -15	*5800428200	Lens, Cassette		
2 -16	*5800234300	Plate, Reflective		
2 -17	5310006601	Lamp, 6V		
2 -18	*5800423302	Filter		
2 -19	5378902500	Head, R/P Combination		
2 -20	*5800504800	Spring, Head		
2 -21	5800428400	Holder, R		
2 -22	5800417300	Pinch Roller Assy, R		
2 -23	*5800417700	Spring, Pinch Roller; R		
2 -24	*5200104600	PCB Assy, SENSOR		
2 -25	*5800445101	Arm Assy, Brake; L		
2 -26	*5800420100	Spring, Brake		
2 -27	*5800416900	Spring, Pressure		
2 -28	5540055000	Steel Ball, ø2		
2 -29	*5800417101	Spring, Head Base		
2 -30	*5800445201	Arm Assy, Brake; R		
2 -31	5540056000	Steel Ball, ø3		
2 -32	*5581062000	Clamper, Cord; E		
2 -33	*5800416600	Plate, Head Base		
2 -34	*5800414800	Bracket, Mechanism; A		
2 -35	*5800416700	Plate Assy		
2 -36	*5800417000	Spacer		
2 -37	*5800414703	Spring, Cassette Pressure; B		
2 -38	*5800426000	Lever, Eject Preventing		
2 -39	*5800427400	Spring, Eject Preventing		
2 -40	*5800428700	Chassis Assy, Mechanism		
2 -41	*5800468100	Plate, Head Shield		
2 -42	*5800510300	Holder		
2 -43	*5800417200	Spring, Head Base Return		
2 -44	*5800414901	Bracket, Mechanism; B		
2 -45	*5800428600	Escutcheon, Lamp		
2 -46	*5200104100	PCB Assy, MECHANISM (3)		
2 -47	*5800423200	Paper, Lamp Insulating		

Z-7000

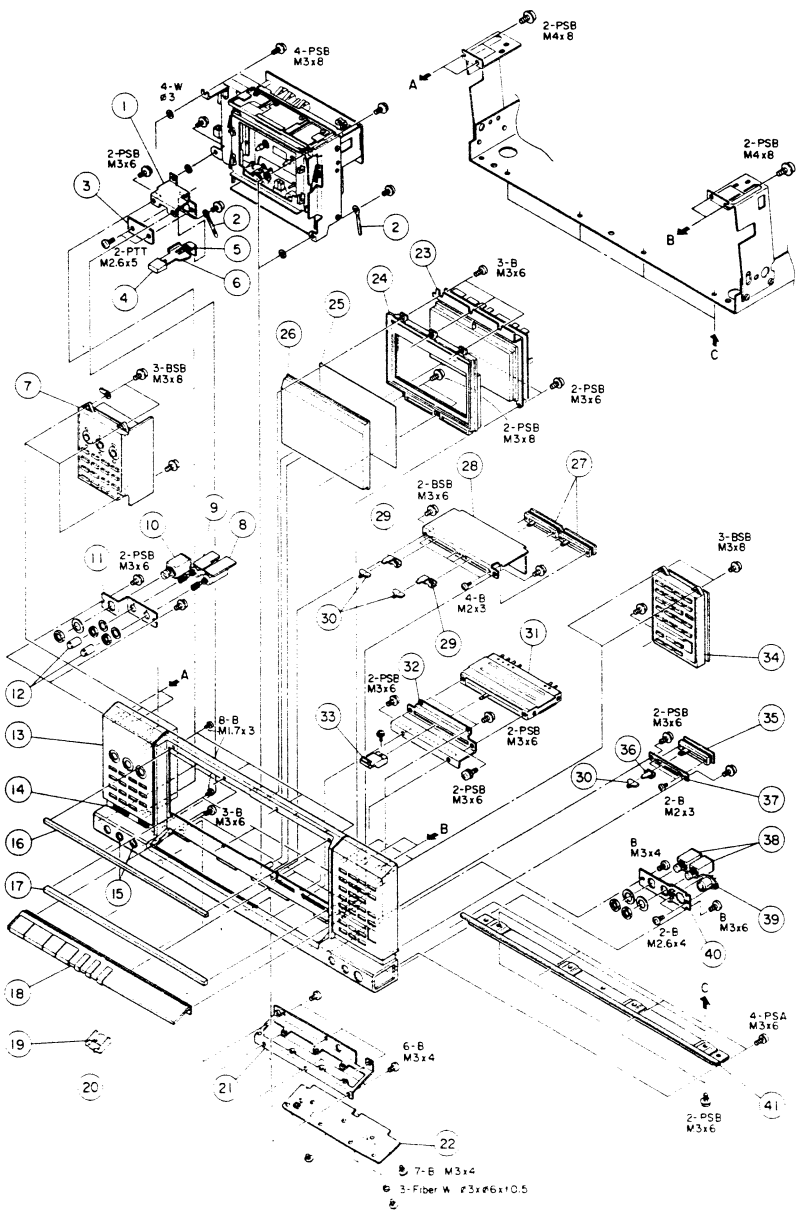
EXPLODED VIEW–3



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
3 - 1	*5200103900	PCB Assy, MECHANISM (1)		
3 - 2	*5800423500	Arm, Release; A		
3 - 3	*5800424200	Shaft		
3 - 4	*5800423601	Arm Assy, Release; B		
3 - 5	*5800436500	Stopper		
3 - 6	*5800427300	Spring, Eject Lock; R		
3 - 7	*5800425500	Plate, Joint		
3 - 8	*5800427200	Spring, Eject Lock; L		
3 - 9	*5800425200	Arm Assy, Eject Lock; R		
3 -10	*5800424600	Bracket Assy, Lock Arm; R		
3 -11	*5800424101	Cam, Eject Lock		
3 -12	*5800425400	Roller, Rock Arm		
3 -13	*5800424000	Plate, Rock Cam Joint		
3 -14	*5800436400	Collar, Joint		
3 -15	*5800424300	Bracket Assy, Lock Arm; L		
3 -16	*5800424800	Arm Assy, Eject Lock; L		
3 -17	*5800426600	Spring, Sensor Arm; A		
3 -18	*5800461400	Spring, Sensor Arm; B		
3 -19	*5800426300	Arm, Sensor; A		
3 -20	*5800426500	Arm, Sensor; C		
3 -21	*5800426400	Arm, Sensor; B		
3 -22	5370003600	Motor, Reel; DC		
3 -23	*5800235900	Plate, Shield	V-1RX	
3 -24	5370001400	Motor, DC	V-9	
3 -25	5800123300	Pulley, V	V-9	
3 -26	*5800423400	Arm, Eject; A		
3 -27	5282009601	Var. Res., 10kΩ (B)		
3 -28	*5800418600	Bracket Assy, Motor		
3 -29	*5800418800	Joint		
3 -30	*5800418900	Arm Assy, Balance		
3 -31	*5800114600	Spring, Balance Arm	V-9	
3 -32	5800428900	Cam, Control		
3 -33	5800419200	Belt, Reduction Pulley		
3 -34	5800117200	Pulley, Reduction	V-9	
3 -35	*5800425601	Arm Assy, Eject Release		
3 -36	5800426101	Damper Assy		
3 -37	*5800426800	Bracket, PCB		
3 -38	*5800442300	Nut		
3 -39	5800419601	Table Assy, Reel		
3 -40	*5800428700	Chassis Assy, Mechanism		
3 -41	*5800448000	Arm Assy, Head Base		
3 -42	5370003500	Motor Assy, Capstan; DC		

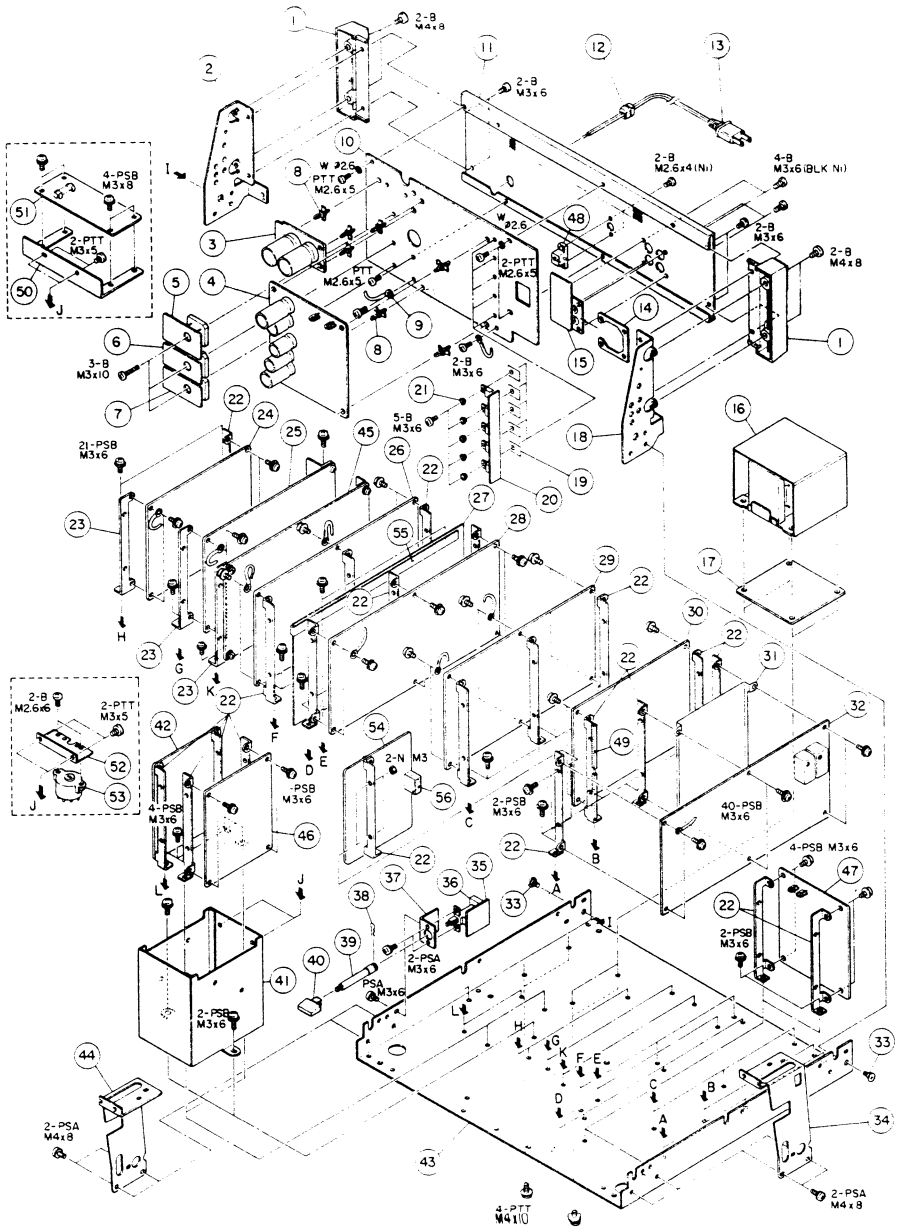
EXPLODED VIEW–4



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
4 - 1	*5800427101	Holder Eject		
4 - 2	*5581038000	Clamper, Cord; A		
4 - 3	*5200104000	PCB Assy, MECHANISM (2)		
4 - 4	5800410400	Button		
4 - 5	*5800427002	Spring, Eject Return		
4 - 6	*5800426902	Lever, Eject		
4 - 7	5301853300	Key Unit, 1-L		
4 - 8	*5200104300	PCB Assy, PITCH CON		
4 - 9	*5200104700	PCB Assy, HEADPHONE VR		
4 -10	5330008500	Jack, PHONES		
4 -11	*5800433400	Bracket, Jack		
4 -12	5800448400	Knob, VR		
4 -13	*5800448500	Panel, Front; A		
4 -14	*5800432200	Escutcheon, Button		
4 -15	*5800433800	Escutcheon, VR Knob		
4 -16	*5800431000	Sash, A		
4 -17	*5800431100	Sash, B		
4 -18	*5800443902	Sash Assy, Control		
4 -19	*5800447800	Lens, VR Knob		
4 -20	5800447700	Knob, Master VR		
4 -21	*5800434400	Bracket, Control PCB		
4 -22	*5200103200	PCB Assy, CONTROL SW		
4 -23	5296006201	Meter, FL		
4 -24	*5800435301	Escutcheon, Meter		
4 -25	*5800430800	Filter		
4 -26	*5800434301	Cover, Meter		
4 -27	*5200104400	PCB Assy, VOLUME (1)		
4 -28	*5800469501	Bracket, VR		
4 -29	*5800433100	Lever, Knob; B		
4 -30	5800433700	Knob, VR		
4 -31	5284006600	Var. Res., Slide; 50kΩ (A) x 2		
4 -32	*5800432801	Bracket, Master VR		
4 -33	*5800434502	Slider, VR		
4 -34	5301853400	Key Unit, 1-R		
4 -35	*5200104500	PCB Assy, VOLUME (2)		
4 -36	*5800433000	Lever, Knob; A		
4 -37	*5800433200	Bracket, VR; A		
4 -38	5330008400	Jack, MIC		
4 -39	5334027500	Connector Socket, 4P		
4 -40	*5800433500	Bracket, Mic Jack		
4 -41	*5800435100	Bracket, Chassis		
	*5640043110	Panel Assy, Front (Included Part REF. NOs 4 -1 to 4 -41.)		

EXPLODED VIEW–5



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
5 - 1	*5800443801	Foot Assy, Rear		
5 - 2	*5800434700	Bracket, Rear Panel; L		
5 - 3	*5200105600	PCB Assy, CONDENSER		
5 - 4	*5200102400	PCB Assy, POWER SUPPLY [All except US, C]		
	*5200102410	PCB Assy, POWER SUPPLY [US, C]		
5 - 5	*5200103600	PCB Assy, DIODE (1)		
5 - 6	*5200103700	PCB Assy, DIODE (2)		
5 - 7	*5200103800	PCB Assy, DIODE (3)		
5 - 8	*5787000300	Support, PCB		
5 - 9	*5581038000	Clamper, Cord; A		
5 -10	*5800435202	Heatsink		
5 -11	*5800509300	Panel, Rear; A		
5 -12	‡*5534660000	Bush, Cord; 4N-4 [All except UK]		
	‡*5317001700	Bush, Cord; 4N-5 [UK]		
5 -13	‡*5128027000	Cord, AC Power [J]		
	‡*5350010800	Cord, AC Power [US, C, GE]		
	‡*5128018000	Cord, AC Power [E]		
	‡*5350008300	Cord, AC Power [A]		
	‡*5128047000	Cord, AC Power [UK]		
5 -14	*5800525800	Nut, Plate		
5 -15	*5200104200	PCB Assy, IN/OUT		
5 -16	‡*5320020301	Transformer, Power [J]		
	‡*5320020401	Transformer, Power [US, C]		
	‡*5320020601	Transformer, Power [GE]		
	‡*5320020501	Transformer, Power [E, UK, A]		
5 -17	*5800433600	Plate, Shield; A		
5 -18	*5800434800	Bracket, Rear Panel; R		
5 -19	*5033291000	Plate Insulating		
5 -20	*5200103500	PCB Assy, TRANSISTOR		
5 -21	*5033295000	Tube, Insulating; P		
5 -22	*5800442600	Bracket, PCB; A		
5 -23	*5800442700	Bracket, PCB; B		
5 -24	*5200102020	PCB Assy, AMPL CONTROL [All except US, C]		
	*5200102030	PCB Assy, AMPL CONTROL [US, C]		
5 -25	*5200101400	PCB Assy, CONTROL [All except US, C]		
	*5200101410	PCB Assy, CONTROL [US, C]		
5 -26	*5200100900	PCB Assy, COUNTER		
5 -27	*5800469000	Plate, Shield; C		
5 -28	*5200100220	PCB Assy, PLAYBACK AMPL [All except US, C]		
	*5200100230	PCB Assy, PLAYBACK AMPL [US, C]		
5 -29	*5200101600	PCB Assy, DOLBY [All except US, C]		
	*5200101610	PCB Assy, DOLBY [US, C]		
5 -30	*5200101800	PCB Assy, DBX [All except US, C]		
	*5200101810	PCB Assy, DBX [US, C]		
5 -31	*5800442600	Plate, Shield; D		
5 -32	*5200100602	PCB Assy, REC AMPL		
5 -33	*5581056000	Screw, Shoulder; A		
5 -34	*5800444702	Bracket, Panel; R		
5 -35	*5200104800	PCB Assy, POWER SW		
5 -36	‡ 5052907000	Spark Killer, 0.01μF + 300Ω/300V [J, GE]		
	‡ 5052910000	Spark Killer, 0.033μF + 120Ω/125V [US]		
	‡ 5052911000	Spark Killer, 0.033μF + 120Ω/250V [C]		
	‡ 5267702500	Spark Killer, 0.0047μF/250V [E, UK, A]		
5 -37	*5800432700	Bracket, Power SW		
5 -38	*5786360500	Pin, Snap		
5 -39	*5534712000	Rod, Joint; B	X-10R	
5 -40	5800410301	Button, Power		
5 -41	*5800447301	Case, Shield		
5 -42	*5200102600	PCB Assy, FADER [All except US, C]		
	*5200102610	PCB Assy, FADER [US, C]		

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

Parts marked with *require longer delivery time.

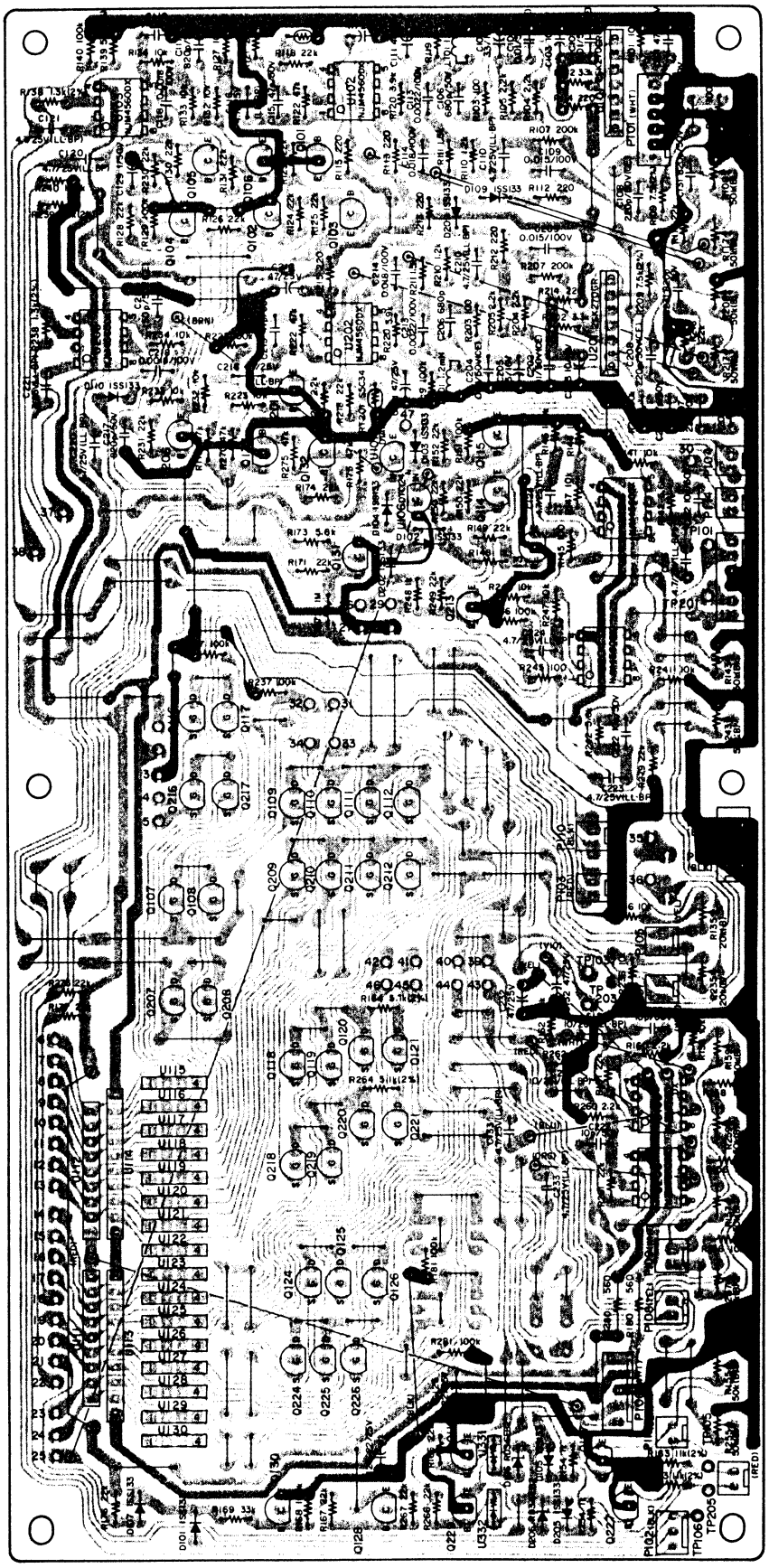
REF. NO.	PARTS NO.	DESCRIPTION	COMMON MODELS	REMARKS
5 -43	*5800447603	Chassis, Ampl.		
5 -44	*5800444602	Bracket, Panel; L		
5 -45	*5200100801	PCB Assy, AUTO BIAS		
5 -46	*5200102820	PCB Assy, MIC AMPL [All except US, C]		
	*5200102830	PCB Assy, MIC AMPL [US, C]		
5 -47	*5200103000	PCB Assy, TEST TONE		
5 -48	5330009200	Jack, X-G952#02		
5 -49	*5786740100	Bush, SG-16		
5 -50	*5800516300	Bracket, FUSE PCB [E, UK, A, US, C]		
5 -51	*5200103300	PCB Assy, FUSE (1) [E, UK, A]		
	*5200103400	PCB Assy, FUSE (2) [US, C]		
5 -52	*5800447500	Bracket, Voltage Selector Switch [GE]		
5 -53	⚠ 5302101200	Switch, Voltage Selector [GE]		
5 -54	*5200131900	PCB Assy, REC EQ		
5 -55	*5800525700	Cushion		
5 -56	*5800532100	Cushion, PCB		

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

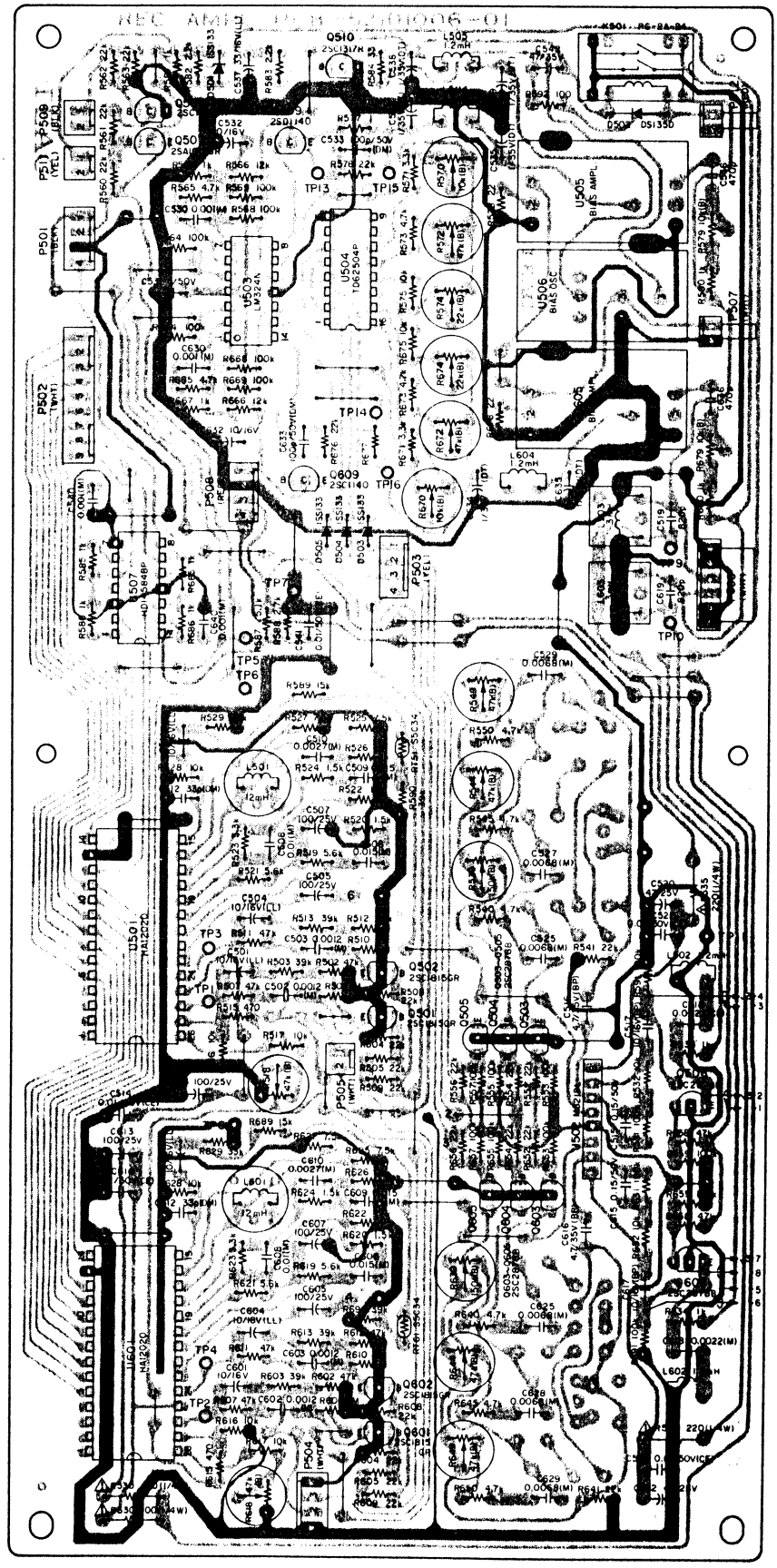
8 PC BOARDS AND PARTS LIST

基板図とパーツ・リスト

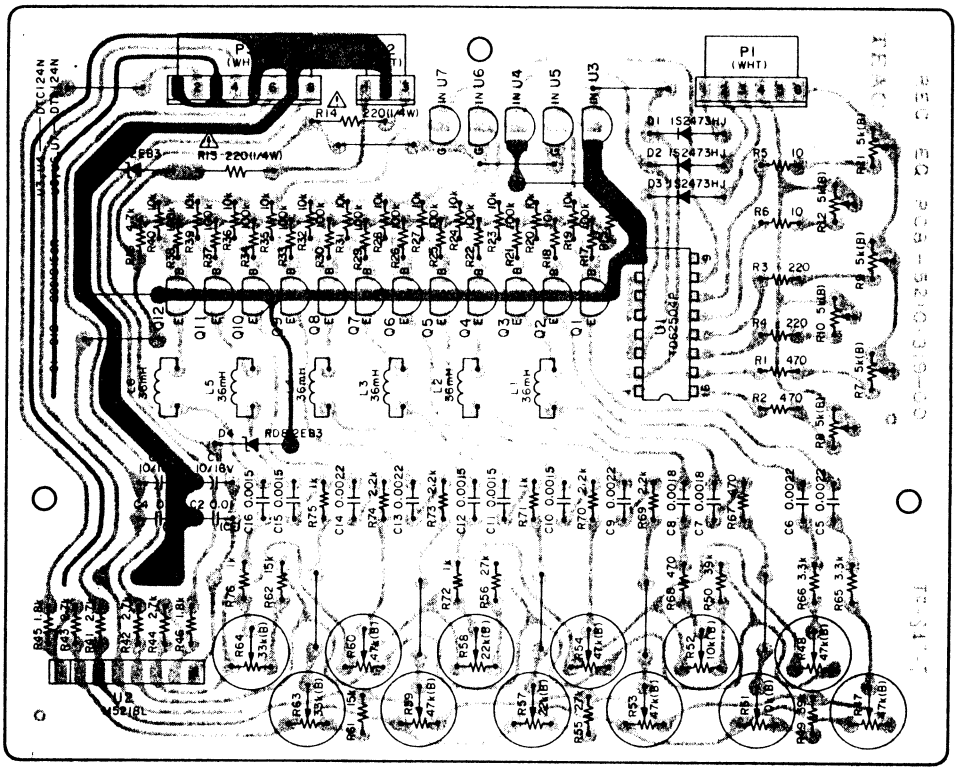
PLAYBACK AMPL PCB ASSY



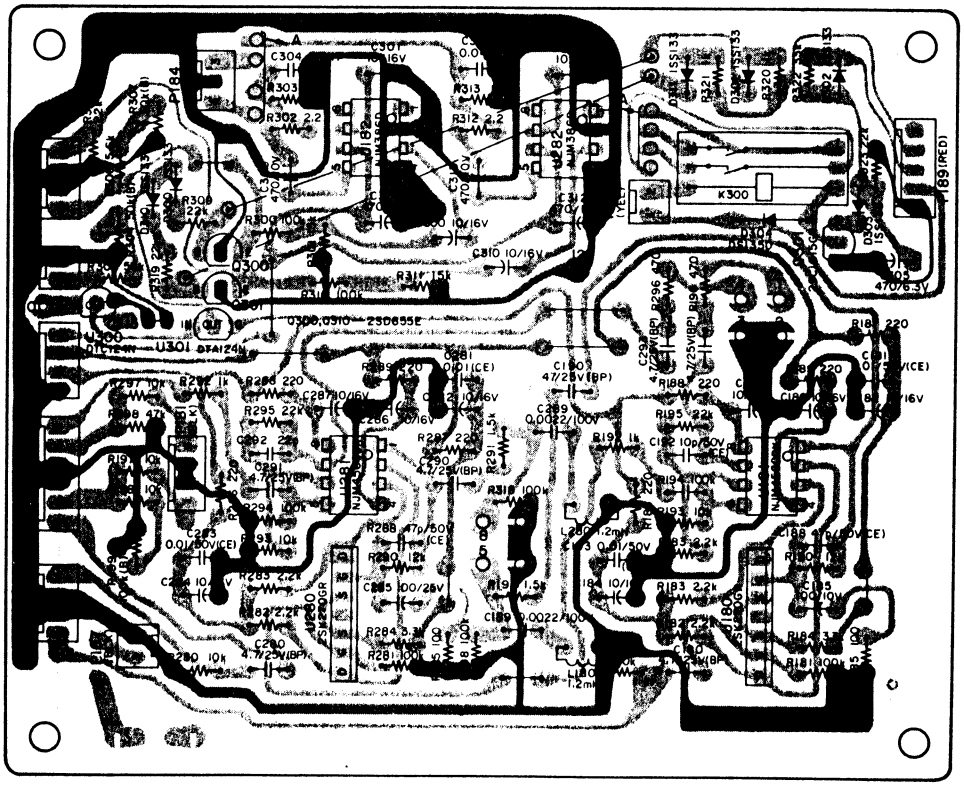
REC AMPL PCB ASSY



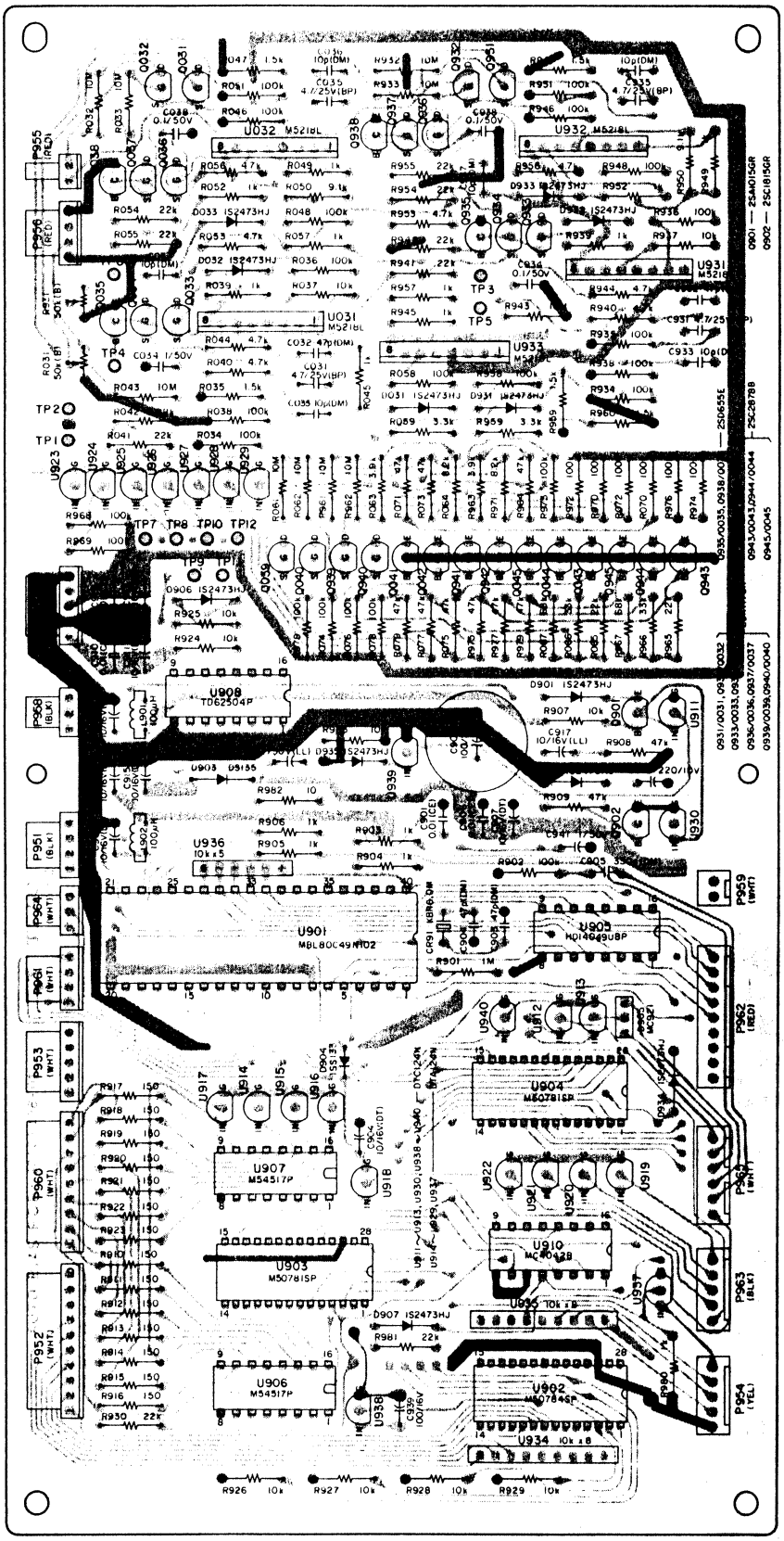
REC EQ PCB ASSY

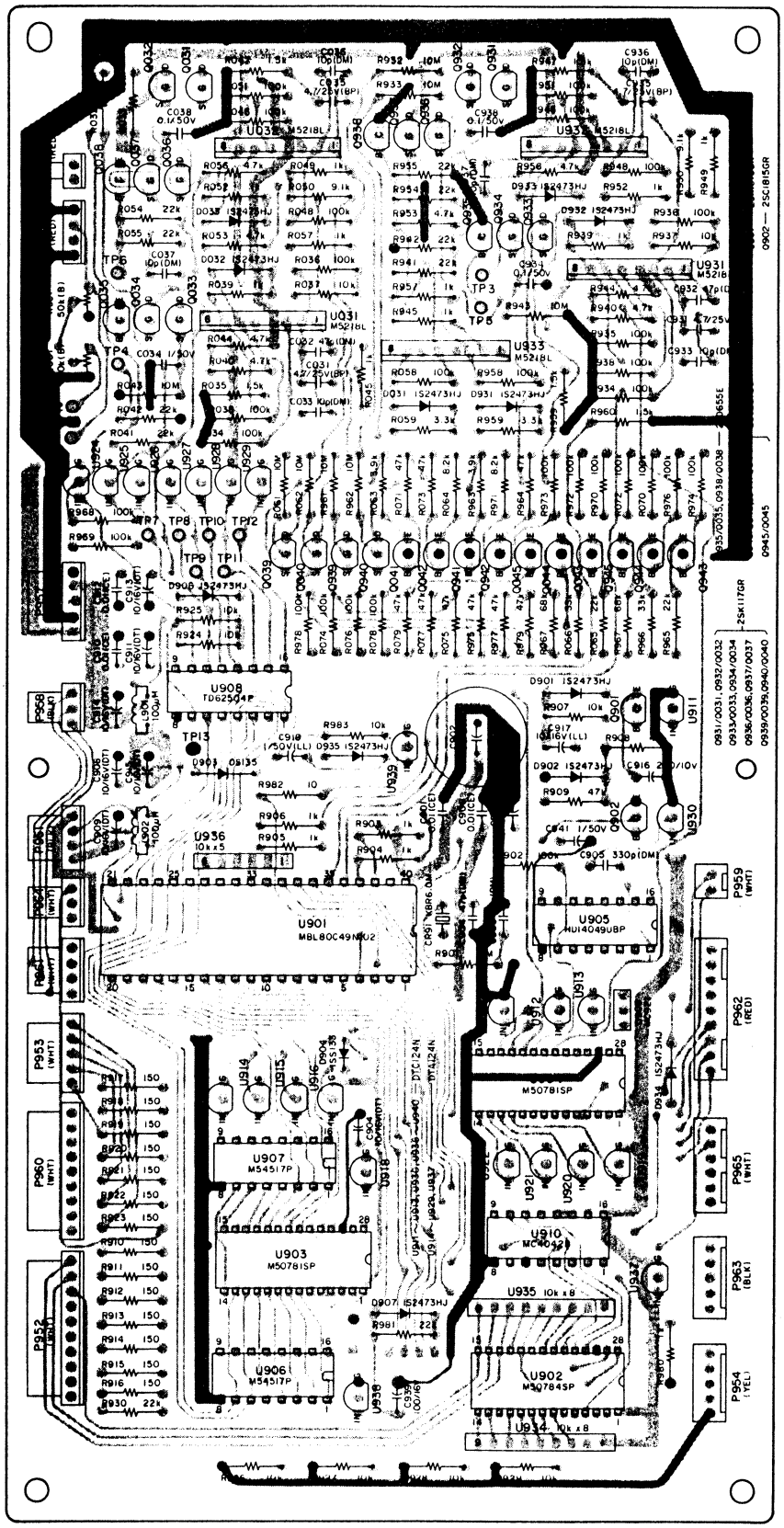


MIC AMPL PCB ASSY

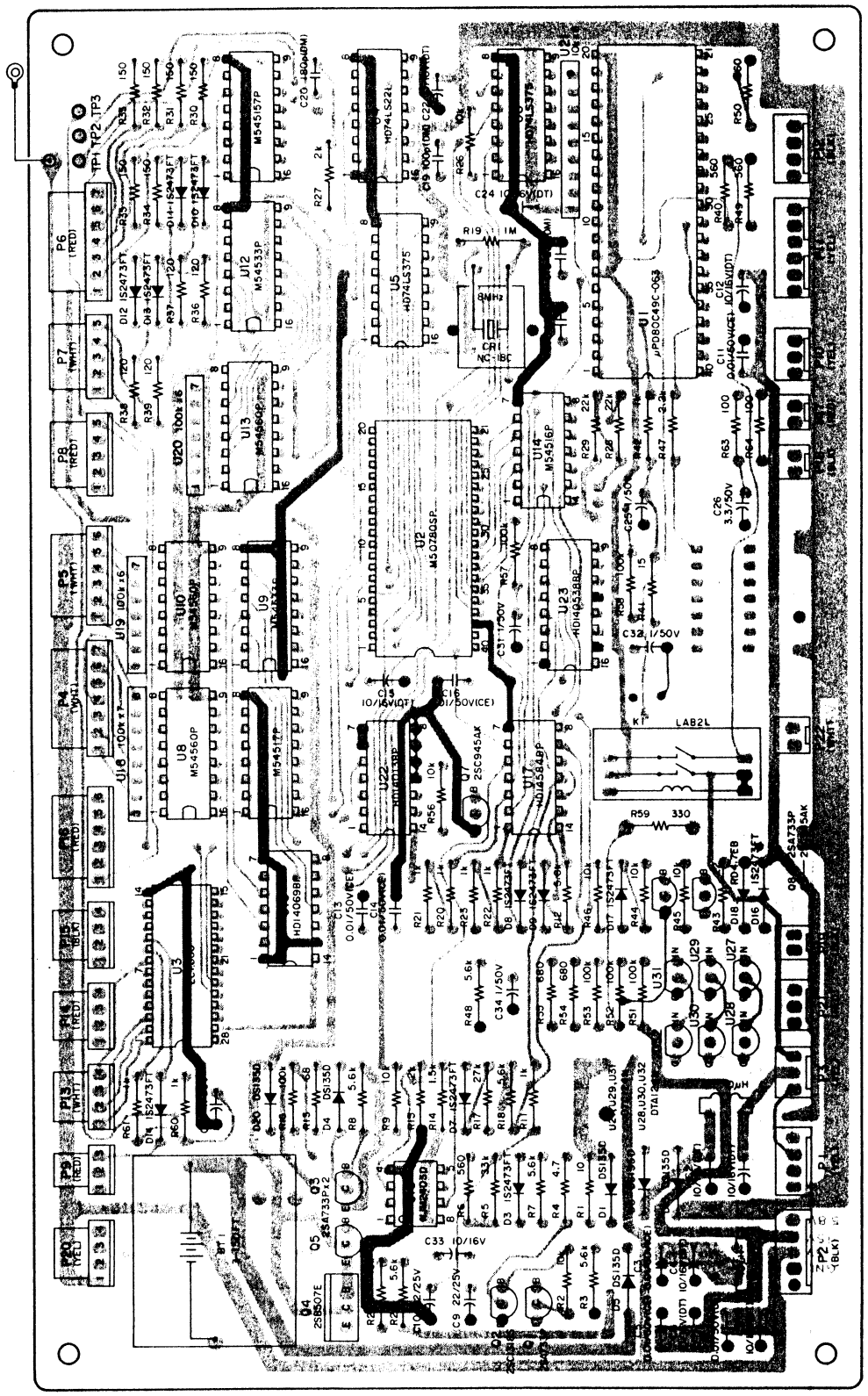


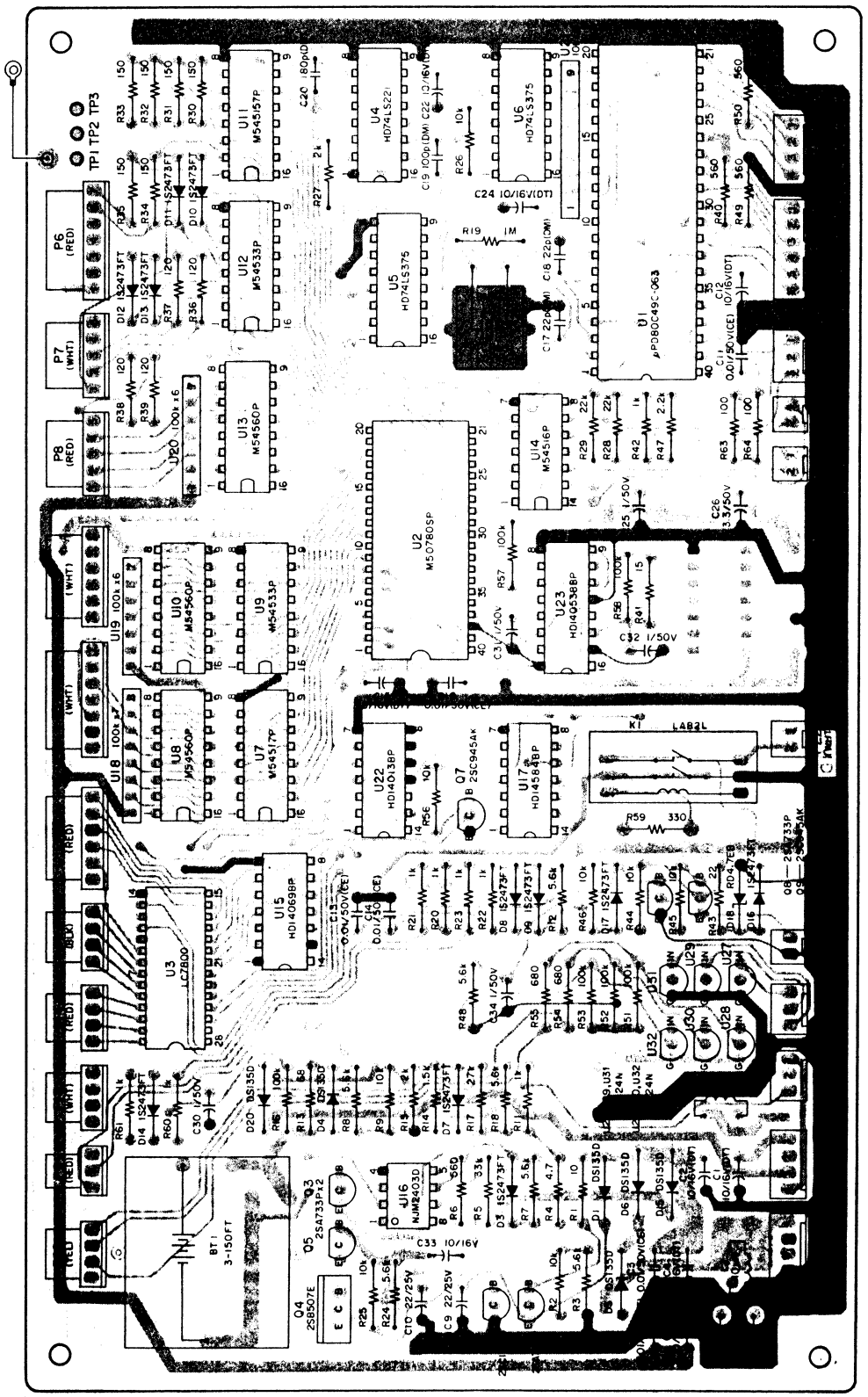
AUTO BIAS PCB ASSY



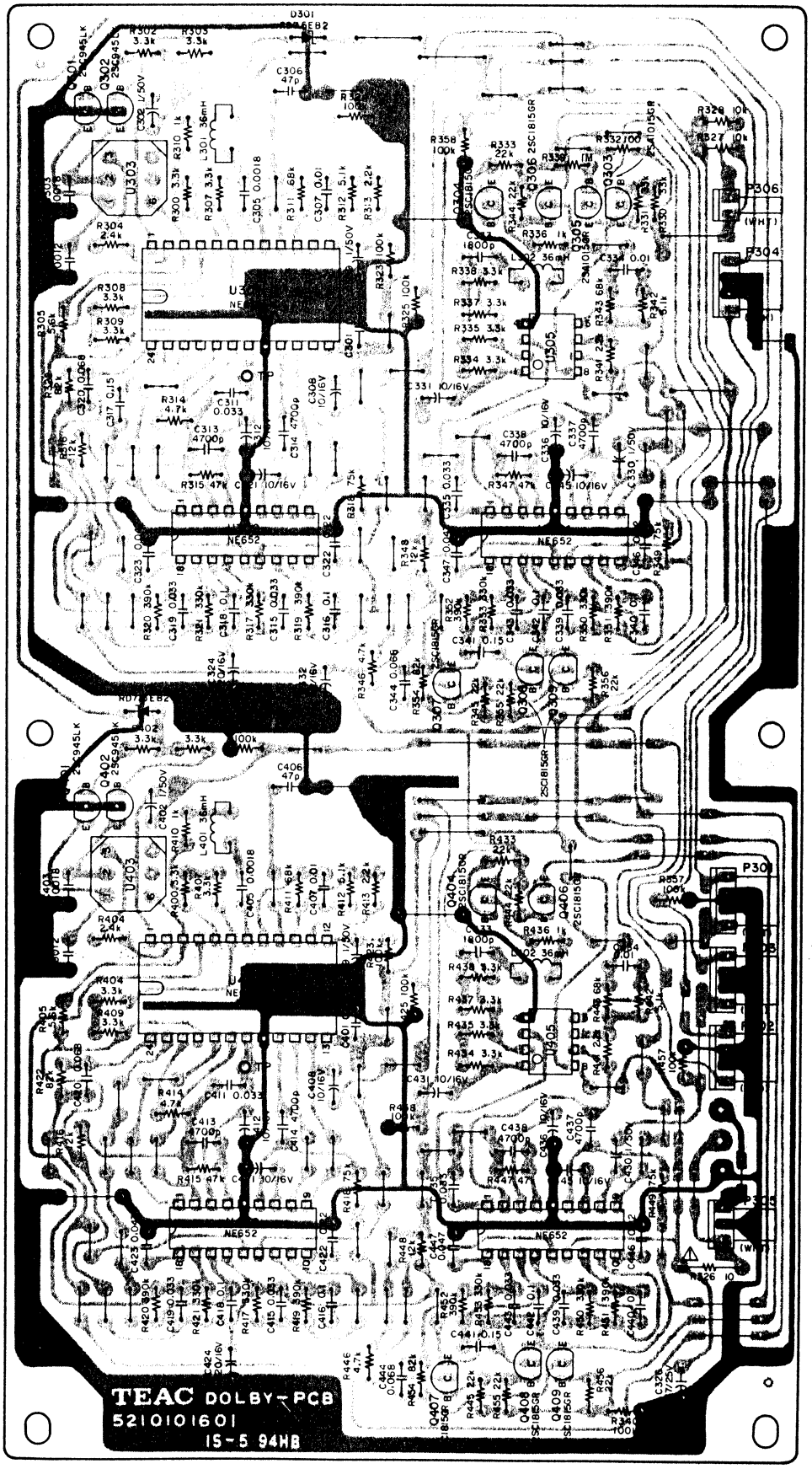

U901
MBL80C49N002
U902
M50784SP
U903
M50781SP
U905
HU14049UBP
U906
M54517P
U907
M54517P
U908
TD62504P
U910
MC4049UB
U935 10k x 8
U936 10k x 5
P952 (WHT)
P953 (WHT)
P954 (YEL)
P959 (WHT)
P960 (WHT)
P962 (RED)
P963 (BLK)
P965 (WHT)

COUNTER PCB ASSY

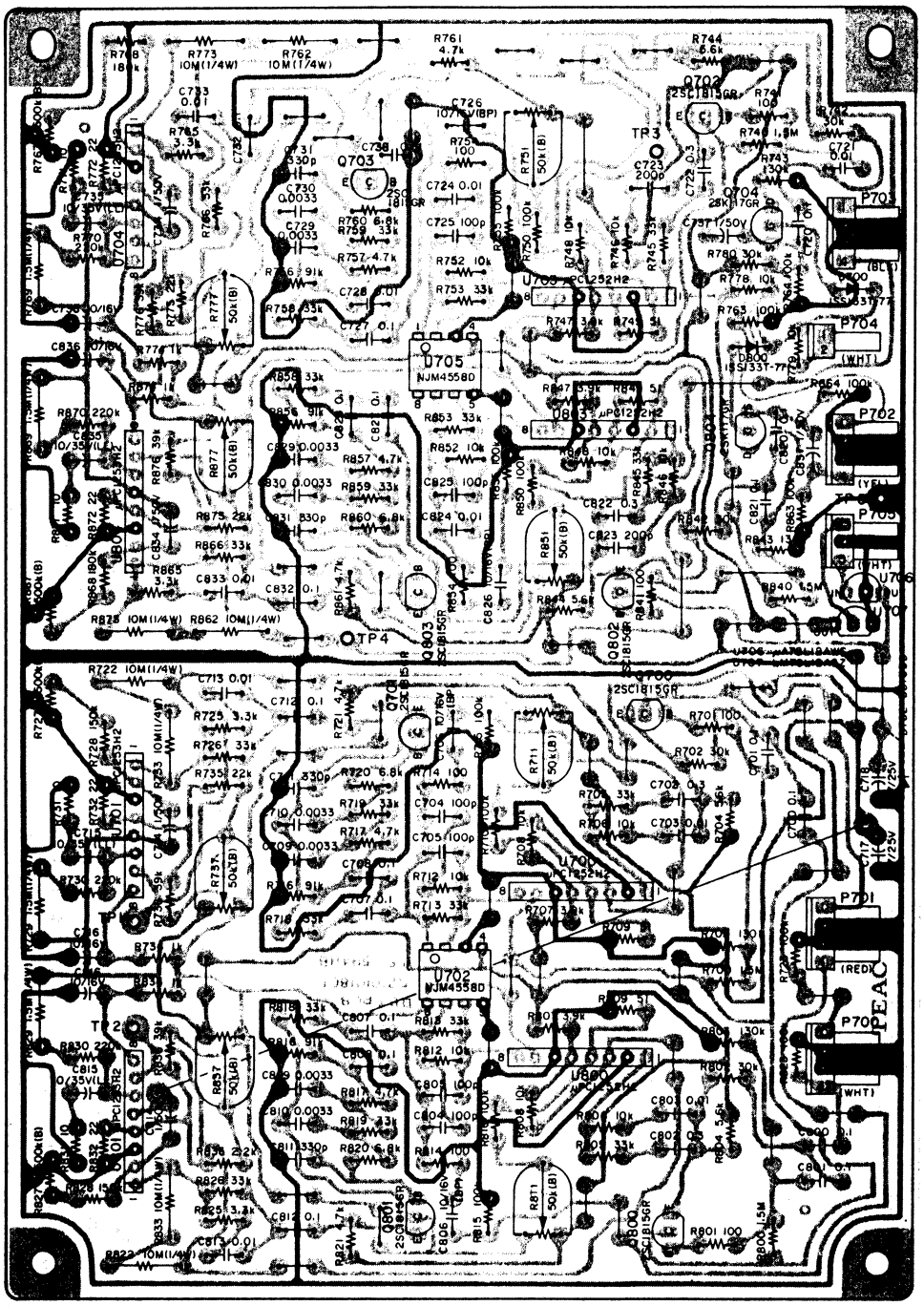




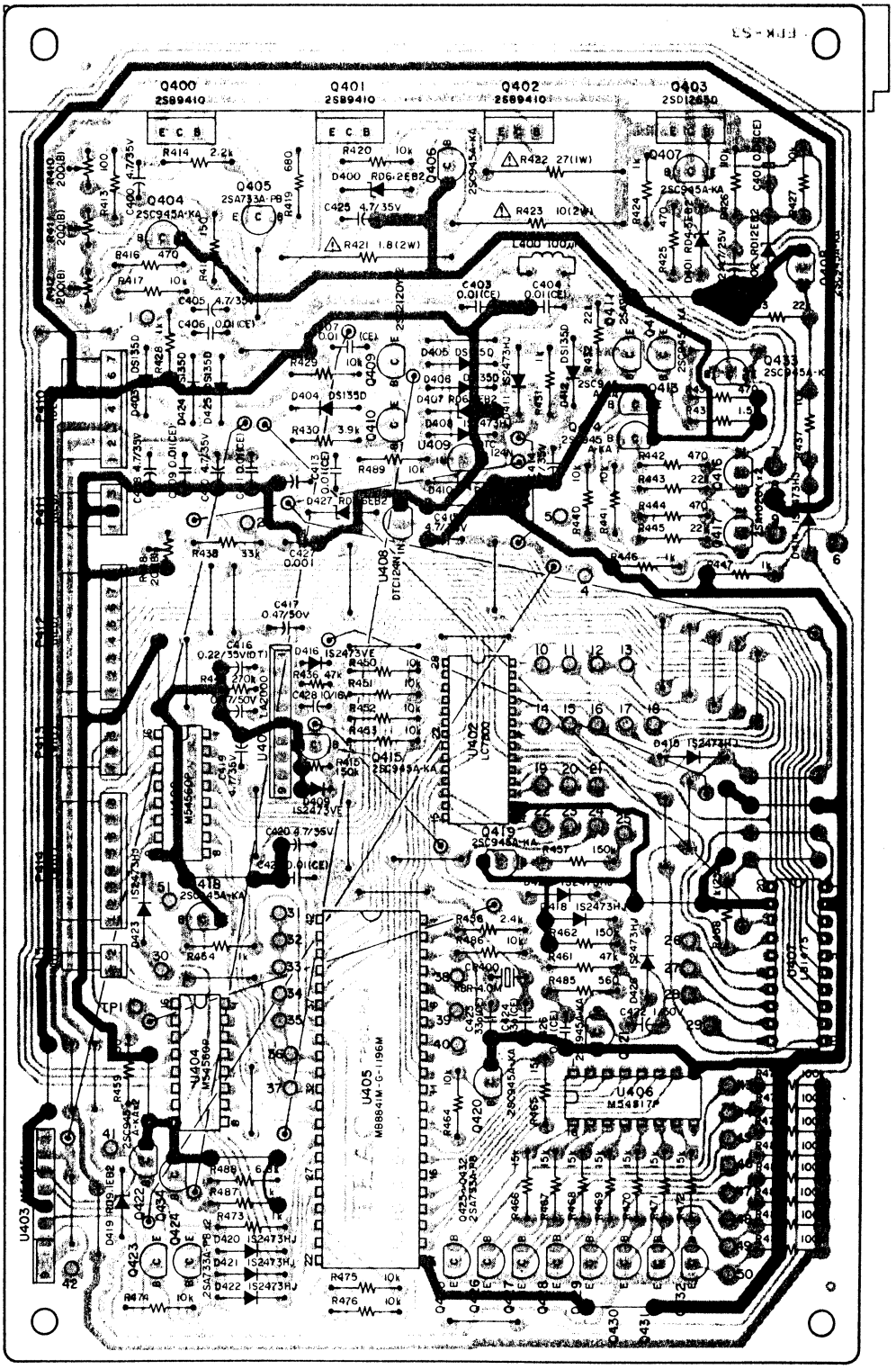
DOLBY PCB ASSY



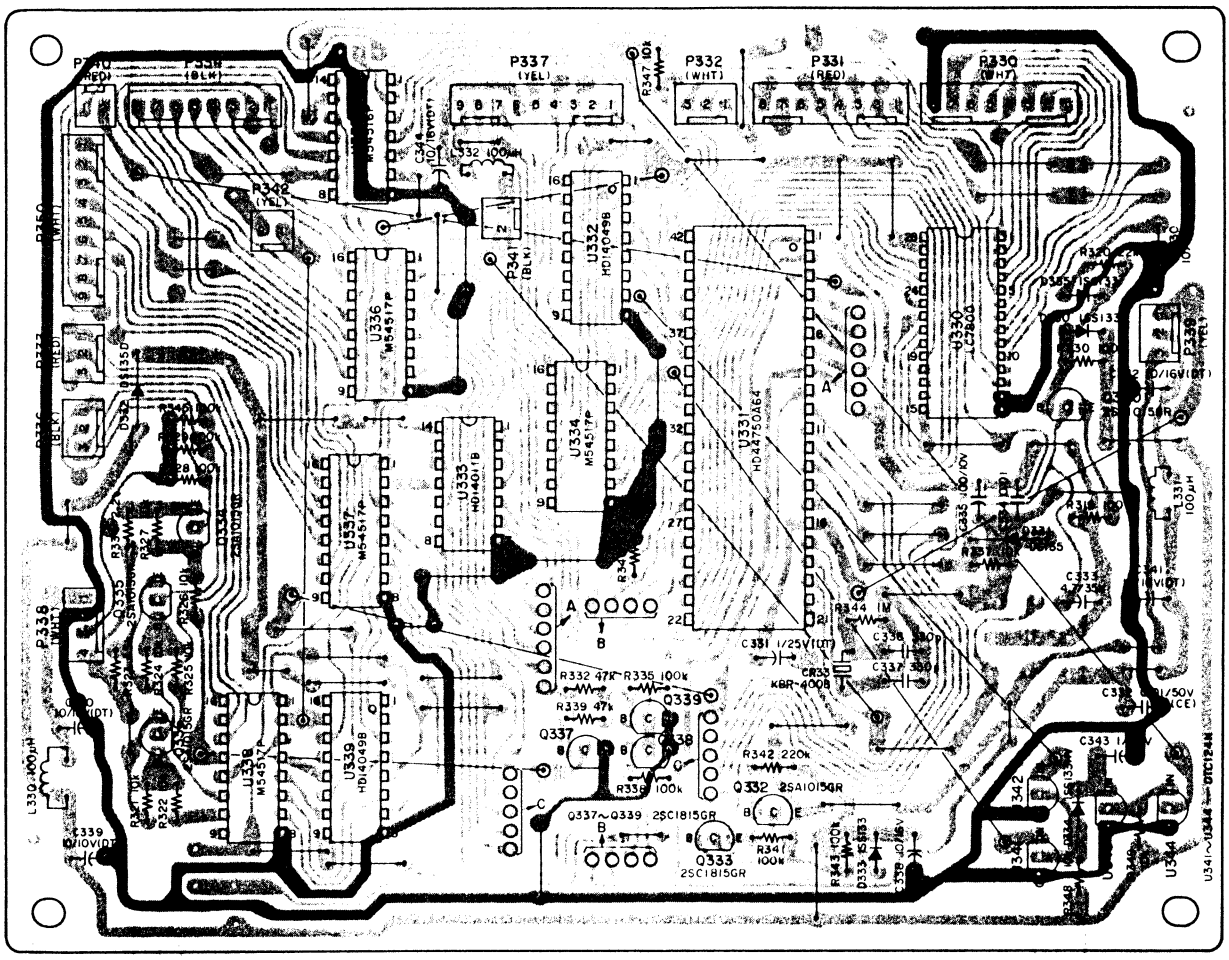
DBX PCB ASSY



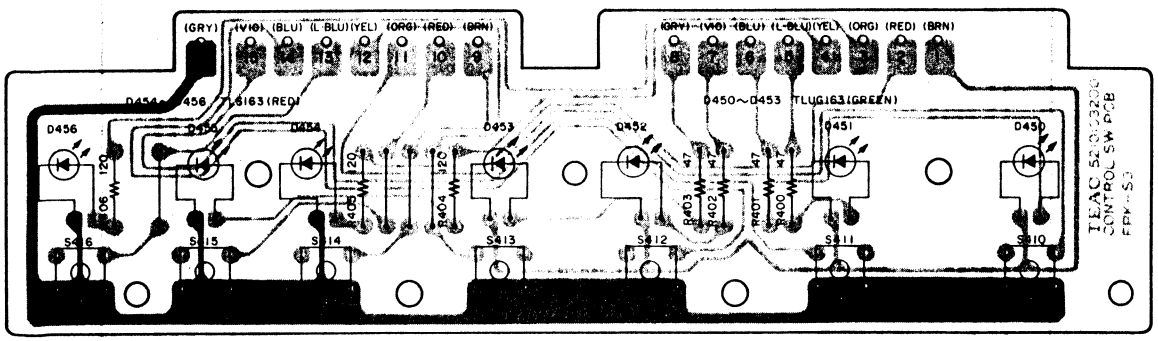
SYSTEM CONTROL PCB ASSY



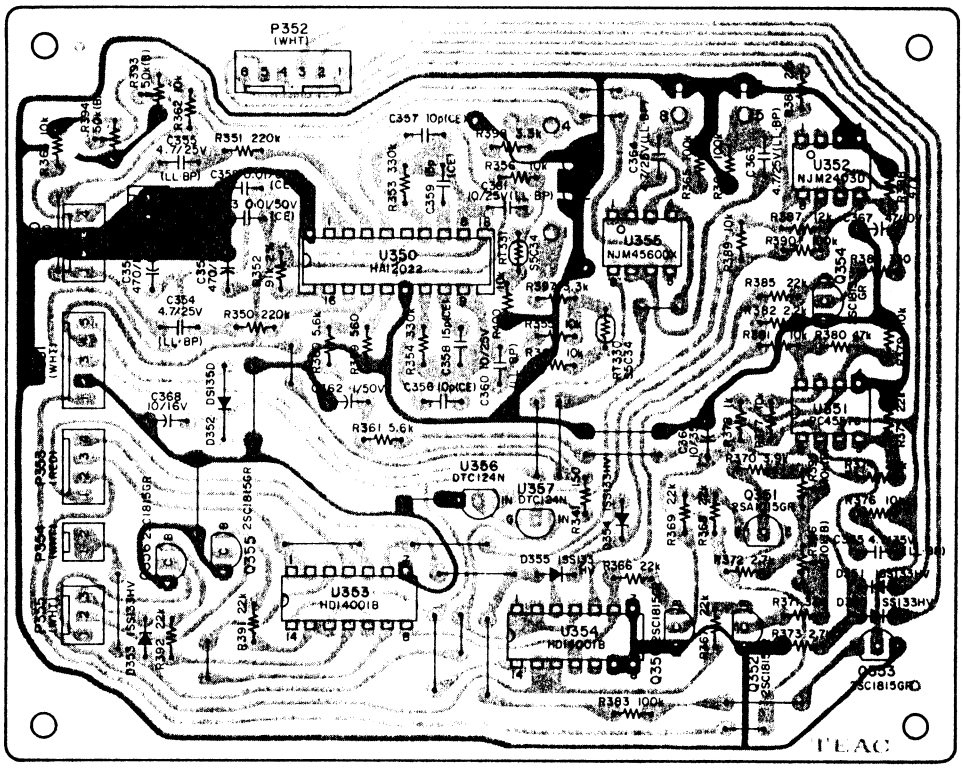
AMPL CONTROL PCB ASSY



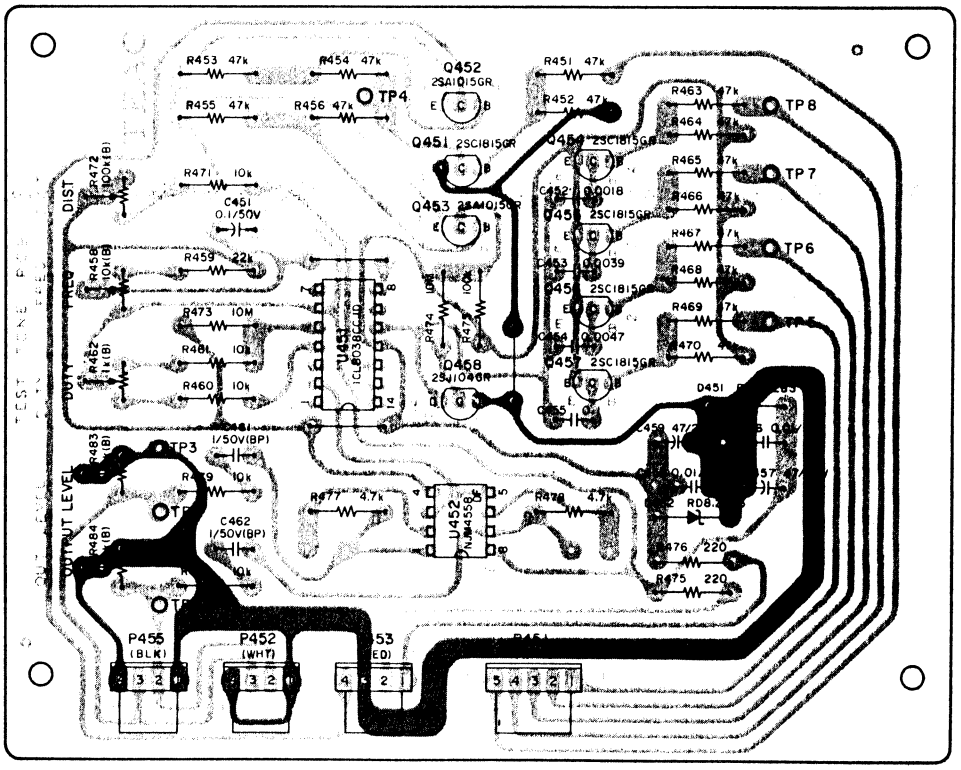
CONTROL SW PCB ASSY



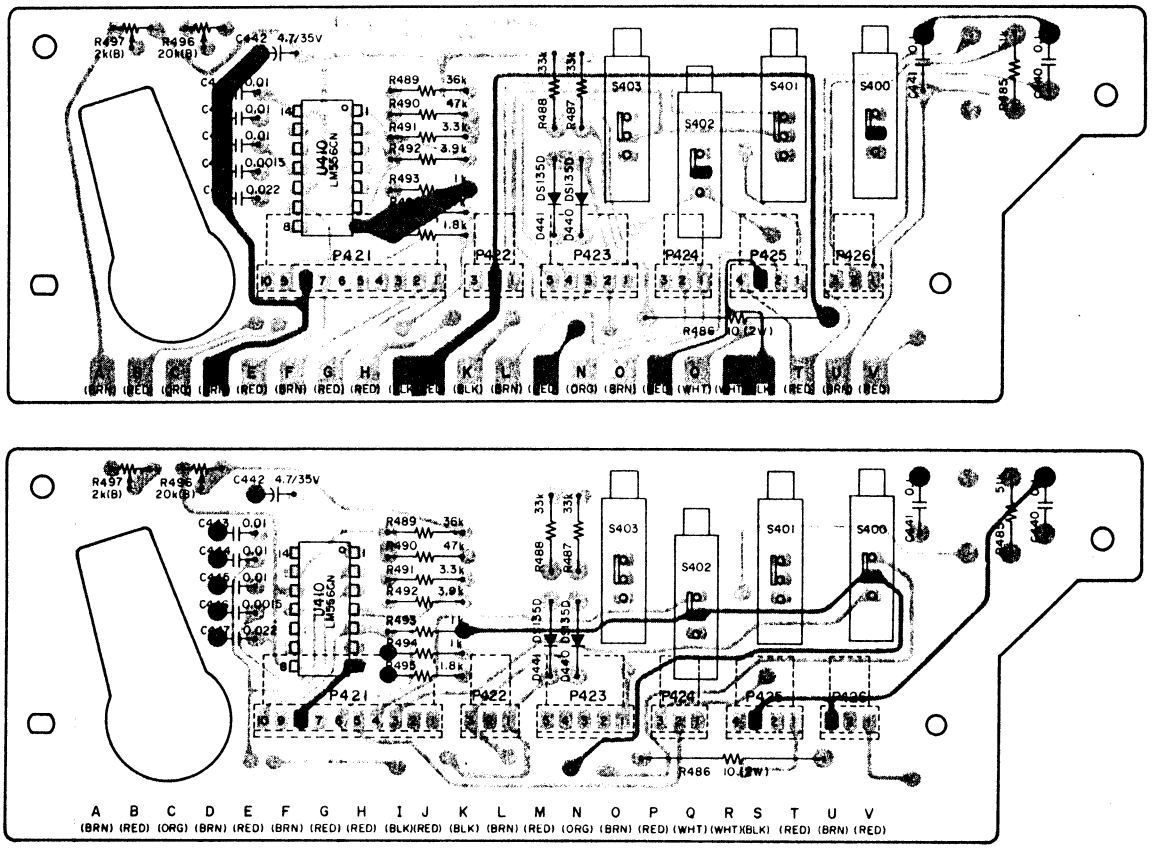
FADER PCB ASSY



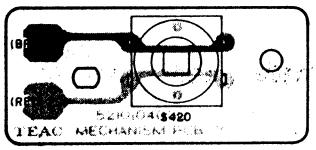
TEST TONE PCB ASSY



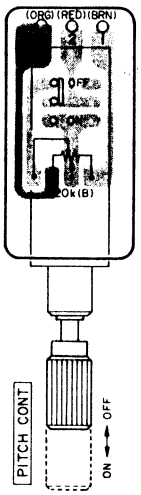
MECHANISM PCB (1) ASSY



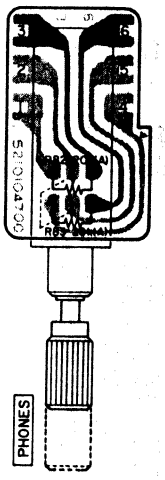
MECHANISM PCB (2) ASSY



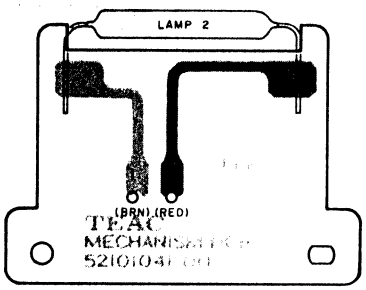
PITCH CON PCB ASSY



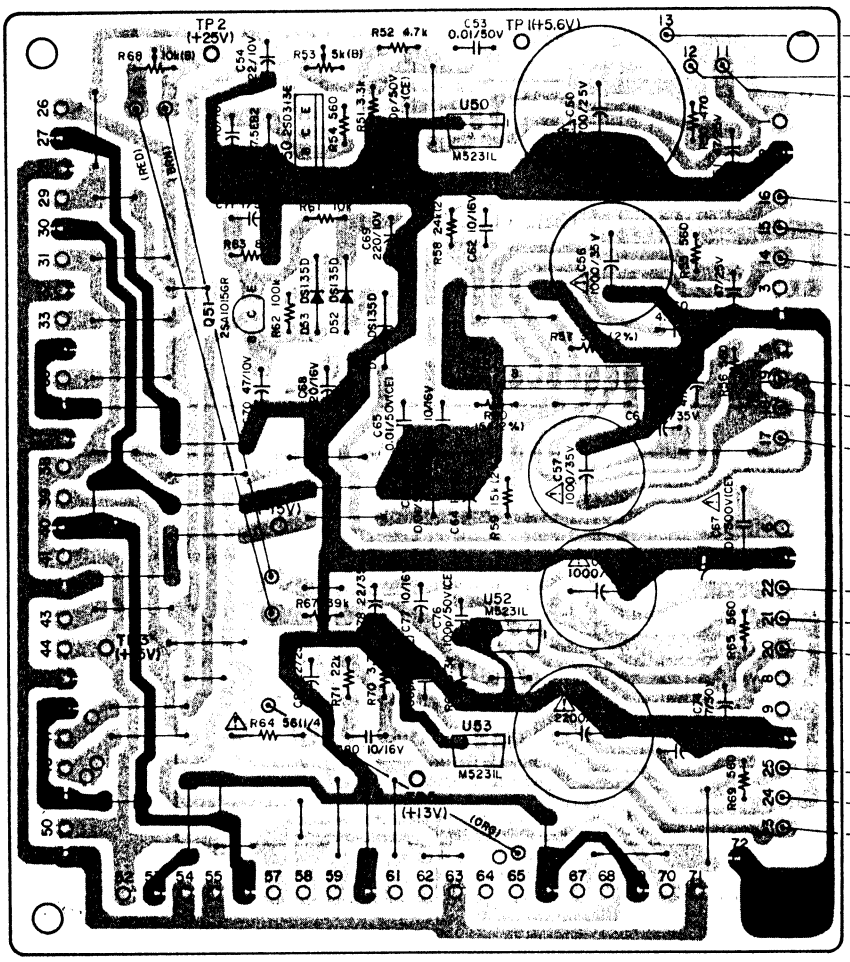
HEADPHONE VR PCB ASSY



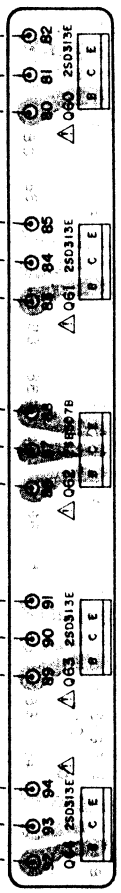
MECHANISM PCB (3) ASSY



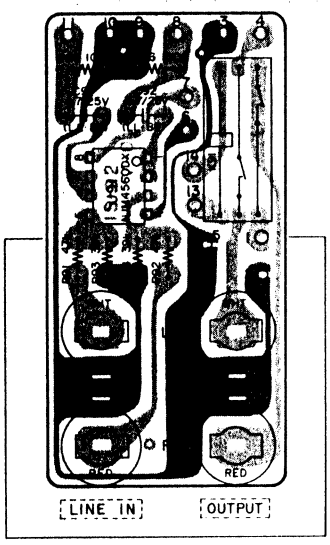
POWER SUPPLY PCB ASSY



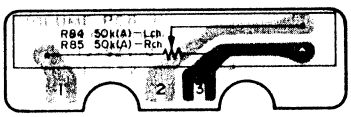
TRANSISTOR PCB ASSY



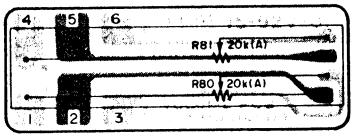
IN/OUTPUT PCB ASSY



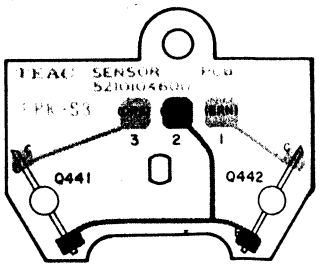
VOLUME PCB (1) ASSY



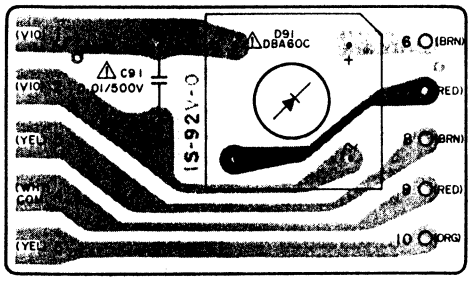
VOLUME PCB (2) ASSY



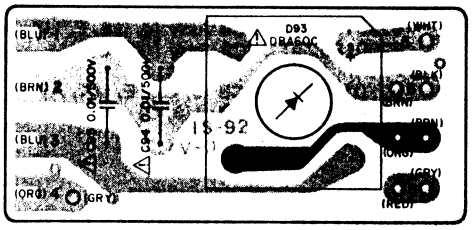
SENSOR PCB ASSY



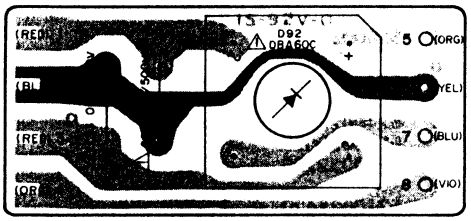
DIODE PCB (1) ASSY



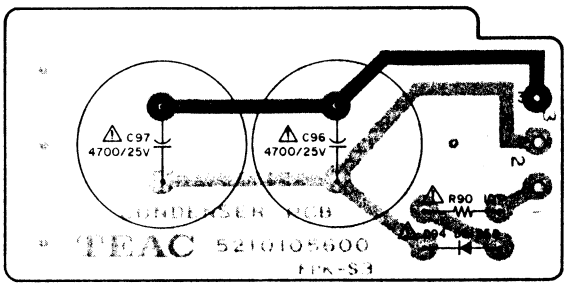
DIODE PCB (3) ASSY



DIODE PCB (2) ASSY



CONDENSER PCB ASSY



NOTES

1. PC boards are shown viewed from foil side.
2. The colors on the PC board illustrations have the following significance:
   - : +B power supply circuit
   - : –B power supply circuit
   - : GND
   - : other
3. Resistor values are in ohms (k=kilo-ohms M=megohms).
4. All capacitor values are in microfarads (p=picofarads).
5. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components. Refer to the appropriate parts list to ensure exact replacement.
6. As the PC boards mentioned below form units, they are omitted in the PCB figures and parts list.
   - KEY UNIT 1-L (5301853300)
     - FADE VR PCB
     - SW PCB (A)
     - SW PCB (C)
   - KEY UNIT 1-R (5301853400)
     - SW PCB (F)
   - METER UNIT (5296006201)
     - METER PCB
   - DC CAPSTAN MOTOR ASSY (5370003500)
     - CAPSTAN SERVO PCB

注

1. 基板図はパターン面が示されています.
2. プリント・パターンは次のように色別されています.
   - : +B電源回路
   - : −B電源回路
   - : GND
   - : その他の回路
3. 抵抗の単位はΩ(k=kΩ, M=MΩ)です.
4. コンデンサの単位はμF(p=pF)です.
5. ⚠マークのある部品は安全重要部品です. 交換するときは必ずティアック指定の部品を使用してください.
6. 下記の基板はユニットになっているため基板図およびパーツ・リストは省略されています.
   - KEY UNIT 1-L (5301853300)
     - FADE VR PCB
     - SW PCB (A)
     - SW PCB (C)
   - KEY UNIT 1-R (5301853400)
     - SW PCB (F)
   - METER UNIT (5296006201)
     - METER PCB
   - DC CAPSTAN MOTOR ASSY (5370003500)
     - CAPSTAN SERVO PCB

Z-7000

PLAYBACK AMPL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200100220	PCB Assy [J, GE, E, UK, A]
	5200100230	PCB Assy [US, C]
	5210100203	PCB [J, GE, E, UK, A]
	5210100303	PCB [US, C]
	IC's	
U102, U202	5220411100	NJM4560D-X
U103, U203	5220411100	NJM4560D-X
U104, U204	5220411100	NJM4560D-X
U105, U205	5220411100	NJM4560D-X
U106	5232251200	DTC-124N
U107	5232251100	DTA-124N
	TRANSISTORS	
U101, U201	5232006100	FET 2SK270GR
Q101, Q201	5145185000	2SD655E
Q102	5230776520	2SC1685R
Q103	5145150000	2SA1015GR
Q104	5230776520	2SC1685R
Q105	5145150000	2SA1015GR
Q106, Q206	5145185000	2SD655E
Q107, Q207	5232007200	FET 2SK364BL
Q108, Q208	5232007200	FET 2SK364BL
Q109, Q209	5232007200	FET 2SK364BL
Q110, Q210	5232007200	FET 2SK364BL
Q111, Q211	5232007200	FET 2SK364BL
Q112, Q212	5232007200	FET 2SK364BL
Q113, Q213	5145185000	2SD655E
Q114	5145150000	2SA1015GR
Q115	5230776520	2SC1685R
Q116, Q216	5232007200	FET 2SK364BL
Q117, Q217	5232007200	FET 2SK364BL
Q118, Q218	5232007200	FET 2SK364BL
Q119, Q219	5232007200	FET 2SK364BL
Q120, Q220	5232007200	FET 2SK364BL
Q121, Q221	5232007200	FET 2SK364BL
Q122, Q222	5232007200	FET 2SK364BL
Q123, Q223	5232007200	FET 2SK364BL
Q124, Q224	5232007200	FET 2SK364BL
Q125, Q225	5232007200	FET 2SK364BL
Q126, Q226	5232007200	FET 2SK364BL
Q127, Q227	5145185000	2SD655E
Q128	5145150000	2SA1015GR
Q129, Q229	5145185000	2SD655E
Q130	5230776520	2SC1685R
Q131	5145185000	2SD655E
Q132	5230776520	2SC1685R
Q133	5145185000	2SD655E
	DIODES	
D102, D202	5224015020	1SS133T-77
D103	5224015020	1SS133T-77
D104	5224015020	1SS133T-77
D105, D205	5224015020	1SS133T-77
D106, D206	5224539301	Zener, RD3.6EB2
D107	5224015020	1SS133T-77
D109, D209	5224015020	1SS133T-77
D110	5224015020	1SS133T-77

REF. NO.	PARTS NO.	DESCRIPTION		
	CARBON RESISTORS			
	All resistors are rated ±5% tolerance and ¼ watt unless otherwise noted.			
R101, R201	5240033020	100kΩ		
R102, R202	5240029420	3.3kΩ		
R103, R203	5240025820	100Ω		
R104, R204	5240029020	2.2kΩ		
R105, R205	5240029020	2.2kΩ		
R106, R206	5240025820	100Ω		
R107, R207	5240073720	200kΩ		2%
R109, R209	5240070320	7.5kΩ		2%
R110, R210	5240028420	1.2kΩ		
R111, R211	5240028620	1.5kΩ		
R112, R212	5240026620	220Ω		
R113, R213	5240026620	220Ω		
R114, R214	5240026620	220Ω		
R115, R215	5240026620	220Ω		
R116, R216	5240031420	22kΩ		
R118, R218	5240031420	22kΩ		
R119, R219	5240033020	100kΩ		
R120, R220	5240029620	3.9kΩ		
R121, R221	5240029020	2.2kΩ		
R122, R222	5240032220	47kΩ		
R123, R223	5240031420	22kΩ		
R124	5240031420	220kΩ		
R125	5240031420	22kΩ		
R126	5240031420	22kΩ		
R127, R227	5240033020	100kΩ		
R128	5240031420	22kΩ		
R129	5240033020	100kΩ		
R130, R230	5240031420	22kΩ		
R131, R231	5240031420	22kΩ		
R132, R232	5240030620	10kΩ		
R133, R233	5240030620	10kΩ		
R134, R234	5240030620	10kΩ		
R136, R236	5240030620	10kΩ		
R137, R237	5240033020	100kΩ		
R138, R238	5240068520	1.3kΩ		2%
R139, R239	5240069920	5.1kΩ		2%
R140, R240	5240033020	100kΩ		
R141, R241	5240030620	10kΩ		
R142, R242	5240030020	5.6kΩ		
R144, R243	5240030620	10kΩ		
R145, R245	5240025820	100Ω		
R146, R246	5240033020	100kΩ		
R147, R247	5240030620	10kΩ		
R148, R248	5240028220	1kΩ		
R149, R249	5240031420	22kΩ		
R150, R250	5240031420	22kΩ		
R151	5240033020	100kΩ		
R152	5240031420	22kΩ		
R153, R253	5183168000	10MΩ	¼W	
R154, R254	5240028220	1kΩ		
R156, R256	5240030620	10kΩ		
R158, R258	5240030620	10kΩ		
R160, R260	5240029020	2.2kΩ		
R161, R261	5240031420	22kΩ		
R162, R262	5240033020	100kΩ		

REF. NO.	PARTS NO.	DESCRIPTION		
R163, R263	5240070720	11kΩ	2%	
R164, R264	5240069520	3.6kΩ	2%	
R166, R266	5240031420	22kΩ		
R167, R267	5240031420	22kΩ		
R168	5240033020	100kΩ		
R169	5240031820	33kΩ		
R170, R270	5240032220	47kΩ		
R171	5240031420	22kΩ		
R172	5240035420	1MΩ		
R173	5240030020	5.6kΩ		
R174	5240031420	22kΩ		
R175, R275	5240032220	47kΩ		
R176, R276	5240031420	22kΩ		
R177	5240031420	22kΩ		
R279	5240031420	22kΩ		
R180, R280	5181476000	560Ω	¼W	
R181, R281	5240033020	100kΩ		
R183, R283	5240028220	1kΩ		
	CAPACITORS			
C101, C201	5172208000	Ceramic	47pF	50V
C102, C202	5172236000	Ceramic	0.01μF	50V
C103, C203	5260162550	Elec.	10μF	16V
C104, C204	5172236000	Ceramic	0.01μF	50V
C105, C205	5260164252	Elec.	33μF	16V
C106, C206	5172824000	Polyst.	680pF	50V 5%
C107, C207	5260166852	Elec.	220μF	10V
C108, C208	5172216000	Ceramic	220pF	50V
C109, C209	5171860000	Mylar	0.015μF	100V 5%
C110, C210	5260253650	Elec.	4.7μF	25V BP
C111, C211	5260165252	Elec.	47μF	25V
C112, C212	5260165252	Elec.	47μF	25V
C113, C213	5170360000	Mylar	0.0022μF	100V 5%
C114, C214	5171862000	Mylar	0.018μF	100V 5%
C115, C215	5172208000	Ceramic	47pF	50V
C116, C216	5260253650	Elec.	4.7μF	25V BP
C117, C217	5172826000	Polyst.	820pF	50V 5%
C118, C218	5170358000	Mylar	0.0018μF	100V 5%
C119, C219	5172214000	Ceramic	150pF	50V
C120, C220	5260253650	Elec.	4.7μF	25V BP
C121, C221	5260253650	Elec.	4.7μF	25V BP
C122, C222	5172200000	Ceramic	10pF	50V
C123, C223	5260253650	Elec.	4.7μF	25V BP
C124, C224	5260253650	Elec.	4.7μF	25V BP
C125	5260163452	Elec.	22μF	25V
C126	5260163452	Elec.	22μF	25V
C127, C227	5172200000	Ceramic	10pF	50V
C128, C228	5260255150	Elec.	10μF	25V BP
C129	5260160750	Elec.	1μF	50V
C131, C231	5172826000	Polyst.	820pF	50V 5%
C132, C232	5260165252	Elec.	47μF	25V
C133, C233	5260253600	Elec.	4.7μF	25V BP
C134	5260163452	Elec.	22μF	25V
	VARIABLE RESISTORS			
R108, R208	5150156000	Semi-fixed	50kΩ (B)	
R117, R217	5150156000	Semi-fixed	50kΩ (B)	
R135, R235	5150155000	Semi-fixed	20kΩ (B)	
R143, R243	5150156000	Semi-fixed	50kΩ (B)	
R155, R255	5150156000	Semi-fixed	50kΩ (B)	

REF. NO.	PARTS NO.	DESCRIPTION	
R157, R257	5150156000	Semi-fixed	50kΩ (B)
R159, R259	5150156000	Semi-fixed	50kΩ (B)
	MISCELLANEOUS		
U111, U112	5242107600	Resistor Array, 5.6kΩ x 8	
U113, U114	5242107700	Resistor Array, 43kΩ x 8	
U115, U116	5293003300	Comprex Array, D x 2 + 33kΩ	
U117~U130	5242105900	Resistor Array, 10MΩ x 2 + 33kΩ	
U131, U132	5293003400	Comprex Array, D x 2 + 1kΩ x 2	
RT101,RT201	5143128000	Thermistor, S5C34	
L101, L201	5160107000	Coil, Choke; 1.2 mH	
P101	5336126600	Connector Plug, 6P (WHT)	
P102	5336137300	Connector Plug, 3P (BLK)	
P103, P104	5336135200	Connector Plug, 2P (RED)	
P105	5336145200	Connector Plug, 2P (YEL)	
P106	5336126500	Connector Plug, 5P (WHT)	
P107	5336126200	Connector Plug, 2P (WHT)	
P108	5336145200	Connector Plug, 12P (YEL)	
P109	5336126200	Connector Plug, 2P (WHT)	
P110, P111	5336137200	Connector Plug, 2P (BLK)	
P112	5336135200	Connector Plug, 2P (RED)	
P113	5336135600	Connector Plug, 6P (RED)	
P114	5336126200	Connector Plug, 2P (WHT)	
P115, P116	5336137200	Connector Plug, 2P (BLK)	
	5544750000	Pin, Combination (6 used)	

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

REC AMPL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200100602	PCB Assy
	5210100600	PCB
	IC's	
U501, U601	5220418200	HA12020
U502	5220416200	M5218L
U503	5220405300	LM324N
U504	5293000900	Transistor Array, TD62504P
U507	5220019800	HD14584BP
	TRANSISTORS	
Q501, Q601	5145151000	2SC1815GR
Q502, Q602	5145151000	2SC1815GR
Q503, Q603	5230775000	2SC2878B
Q504, Q604	5230775000	2SC2878B
Q505, Q605	5230775000	2SC2878B
Q506, Q606	5230775000	2SC2878B
Q507	5145150000	2SA1015GR
Q508	5145151000	2SC1815GR
Q509, Q609	5231758500	2SD1140
Q510	5042467000	2SC1317R
	DIODES	
D501	5224015020	1SS133T-77
D502	5224013210	DS135D
D503	5224015020	1SS133T-77
D504	5224015020	1SS133T-77
D505	5224015020	1SS133T-77
	CARBON RESISTORS All resistors are rated ±5% tolerance and 1/8 watt unless otherwise noted.	
R502, R602	5240032220	47kΩ
R503, R603	5240032020	39kΩ
R504, R604	5240031420	22kΩ
R505, R605	5240031420	22kΩ
R506, R606	5240035420	1MΩ
R507, R607	5240032220	47kΩ
R508, R608	5240031420	22kΩ
R509, R609	5240031420	22kΩ
R510, R610	5240035420	1MΩ
R511, R611	5240032220	47kΩ
R512, R612	5240032220	47kΩ
R513, R613	5240032020	39kΩ
R515, R615	5240027420	470Ω
R516, R616	5240030620	10kΩ
R517, R617	5240030620	10kΩ
R519, R619	5240030020	5.6kΩ
R520, R620	5240028620	1.5kΩ
R521, R621	5240030020	5.6kΩ
R522, R622	5240030820	12kΩ
R523, R623	5240029420	3.3kΩ
R524, R624	5240028620	1.5kΩ
R525, R625	5240030320	7.5kΩ
R526, R626	5240028220	1kΩ
R527, R627	5240030320	7.5kΩ
R528, R628	5240030620	10kΩ
R529, R629	5240031820	33kΩ
R530, R630	5183578000	100Ω ¼W Nonflammable
R531, R631	5240033020	100kΩ
R532, R632	5240030620	10kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R534, R634	5240028220	1kΩ
R535	5183586000	220Ω ¼W Nonflammable
R536	5183586000	220Ω ¼W Nonflammable
R540, R640	5240029620	4.7kΩ
R541, R641	5240031420	22kΩ
R545, R645	5240029620	4.7kΩ
R550, R650	5240029620	4.7kΩ
R552, R652	5240031420	22kΩ
R553, R653	5240033020	100kΩ
R554, R654	5240031420	22kΩ
R555, R655	5240033020	100kΩ
R556, R656	5240031420	22kΩ
R557, R657	5240033020	100kΩ
R558, R658	5240032220	47kΩ
R559, R659	5240033020	100kΩ
R560	5240031420	22kΩ
R561	5240031420	22kΩ
R562	5240031420	22kΩ
R563	5240031420	22kΩ
R564, R664	5240033020	100kΩ
R565, R665	5240029820	4.7kΩ
R566, R666	5240030820	12kΩ
R567, R667	5240028220	1kΩ
R568, R668	5240033020	100kΩ
R569, R669	5240033020	100kΩ
R571, R671	5240029420	3.3kΩ
R573, R673	5240029820	4.7kΩ
R575, R675	5240030620	10kΩ
R576, R676	5240031420	22kΩ
R577, R677	5240021020	1Ω
R578, R678	5240024220	22Ω
R580, R680	5240028220	1kΩ
R581	5240028220	1kΩ
R582	5240029020	2.2kΩ
R583	5240029020	2.2kΩ
R584	5240024620	33Ω
R585, R685	5240028220	1kΩ
R586, R686	5240028220	1kΩ
R587	5240029920	5.1kΩ
R588	5240029220	2.7kΩ
R589, R689	5240031020	15kΩ
R590, R690	5240032020	39kΩ
R591, R691	5240033020	100kΩ
R592	5240025820	100Ω
	CAPACITORS	
C501, C601	5260221950	Elec. 10μF 16V (LL)
C502, C602	5170354000	Mylar 0.0012μF 100V 5%
C503, C603	5170354000	Mylar 0.0012μF 100V 5%
C504, C604	5260221950	Elec. 10μF 16V (LL)
C505, C605	5260166152	Elec. 100μF 25V
C506, C606	5171860000	Mylar 0.015μF 100V 5%
C507, C607	5260166152	Elec. 100μF 25V
C508, C608	5171856000	Mylar 0.01μF 100V 5%
C509, C609	5171860000	Mylar 0.015μF 100V 5%
C510, C610	5170362000	Mylar 0.0027μF 100V 5%
C511, C611	5260221950	Elec. 10μF 16V (LL)
C512, C612	5054351000	Dip. Mica 33pF 50V 10%
C513, C613	5260166152	Elec. 100μF 25V
C514, C614	5173433000	Ceramic 0.01μF 50V
C515, C615	5263168123	Meta. 0.15μF 50V 5%

REF. NO.	PARTS NO.	DESCRIPTION
C516, C616	5260066550	Elec. 4.7μF 35V (BP)
C517, C617	5260067050	Elec. 10μF 16V (BP)
C518, C618	5170360000	Mylar 0.0022μF 100V 5%
C519, C619	5263107610	Polypro. 820PF 100V 5%
C520	5260165252	Elec. 47μF 25V
C521	5172236000	Ceramic 0.01μF 50V
C522	5260165252	Elec. 47μF 25V
C523	5172236000	Ceramic 0.01μF 50V
C525, C625	5170372000	Mylar 0.0068μF 100V 5%
C527, C627	5170372000	Mylar 0.0068μF 100V 5%
C529, C629	5170372000	Mylar 0.0068μF 100V 5%
C530, C630	5170352000	Mylar 0.001μF 100V 5%
C531	5260160750	Elec. 1μF 50V
C532, C632	5260162550	Elec. 10μF 16V
C533, C633	5054744000	Dip. Mica 100pF 50V 10%
C534, C634	5266027400	Dip. Tant. 1μF 35V 10%
C535, C635	5266027400	Dip. Tant. 1μF 35V 10%
C536, C636	5263107010	Polypro. 470pF 100V 5%
C537	5260222850	Elec. 33μF 16V (LL)
C538	5266027400	Dip. Tant. 1μF 35V 10%
C539	5266027400	Dip. Tant. 1μF 35V 10%
C540, C640	5170352000	Mylar 0.001μF 100V 5%
C541	5173433000	Ceramic 0.01μF 50V
C542	5260165352	Elec. 47μF 35V
	VARIABLE RESISTORS	
R518, R618	5053352000	Semi-fixed, 47kΩ(B)
R539, R639	5053347000	Semi-fixed, 150kΩ(B)
R544, R644	5053352000	Semi-fixed, 47kΩ(B)
R549, R649	5053352000	Semi-fixed, 47kΩ(B)
R570, R670	5053348000	Semi-fixed, 10kΩ(B)
R572, R672	5053352000	Semi-fixed, 47kΩ(B)
R574, R674	5053356000	Semi-fixed, 22kΩ(B)
R579, R679	5150154000	Semi-fixed, 10kΩ(B)
	COILS	
L501, L601	5056264000	REC EQ, 12mH
L502, L602	5160107000	Choke, 1.2mH
L503, L603	5056659000	Trap, 3mH
L504, L604	5160107000	Choke, 1.2mH
L505	5160107000	Choke, 1.2mH
	MISCELLANEOUS	
U505, U605	5292202100	Bias Ampl. Unit
U506	5292202000	Bias OSC Unit
K501	5290010200	Relay, PG2A24M
RT51, RT61	5143128000	Thermistor, S5C34
P501	5336137400	Connector Plub, 4P (BLK)
P502	5336126900	Connector Plug, 9P (WHT)
P503	5336145400	Connector Plug, 4P (YEL)
P504	5336126400	Connector Plug, 4P (WHT)
P505	5336126200	Connector Plug, 2P (WHT)
P506	5336128600	Connector Plug, 6P (WHT)
P507	5336128200	Connector Plug, 2P (WHT)
P508	5336135400	Connector Plug, 4P (RED)
P509	5336137200	Connector Plug, 2P (BLK)
P511	5336145200	Connector Plug, 2P (YEL)
P512	5336139200	Connector Plug, 2P (RED)
TP 1~TP11	5544750000	Pin, Combination
TP13~TP16	5544750000	Pin, Combination

REC EQ PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200131900	PCB Assy
	5210131900	PCB
	IC's	
U1	5293000900	Transistor Array, TD62504P
U2	5220416200	M5218L
U3, U4	5232251200	DTC-124N
U5~U7	5232251100	DTA-124N
	TRANSISTORS	
Q1~Q12	5145151000	2SC1815GR
	DIODES	
D1~D3	5143118000	1S2473HJ
D4~D5	5224541901	Zener, RD8.2EB3
	CARBON RESISTORS All resistors are rated ±5% tolerance and 1/8 watt unless otherwise noted.	
R1, R2	5240027420	470Ω
R3, R4	5240026620	220Ω
R5, R6	5240023420	10Ω
R13	‡5183586000	220Ω 1/4W Nonflammable
R14	‡5183586000	220Ω 1/4W Nonflammable
R15	5240030620	10kΩ
R16	5240029820	4.7kΩ
R17, R18	5240033020	100kΩ
R19, R20	5240030620	10kΩ
R21, R22	5240033020	100kΩ
R23, R24	5240030620	10kΩ
R25, R26	5240033020	100kΩ
R27, R28	5240030620	10kΩ
R29, R30	5240033020	100kΩ
R31, R32	5240030620	10kΩ
R33, R34	5240033020	100kΩ
R35, R36	5240030620	10kΩ
R37, R38	5240033020	100kΩ
R39, R40	5240030620	10kΩ
R41, R42	5240029220	2.7kΩ
R43, R44	5240029220	2.7kΩ
R45, R46	5240028820	1.8kΩ
R49, R50	5240032020	39kΩ
R55, R56	5240031620	27kΩ
R61, R62	5240031020	15kΩ
R65, R66	5240029420	3.3kΩ
R67, R68	5240027420	470Ω
R69, R70	5240029020	2.2kΩ
R71, R72	5240028220	1kΩ
R73, R74	5240029020	2.2kΩ
R75, R76	5240028220	1kΩ
	CAPACITORS	
C1	5260162550	Elec. 10μF 16V
C2	5172236000	Ceramic 0.01μF 50V
C3	5260162550	Elec. 10μF 16V
C4	5172236000	Ceramic 0.01μF 50V
C5, C6	5170360000	Mylar 0.0022μF 100V 5%

REF. NO.	PARTS NO.	DESCRIPTION
C7, C8	5170358000	Mylar 0.0018μF 100V 5%
C9, C10	5170360000	Mylar 0.0022μF 100V 5%
C11, C12	5170356000	Mylar 0.0015μF 100V 5%
C13, C14	5170360000	Mylar 0.0022μF 100V 5%
C15, C16	5170356000	Mylar 0.0015μF 100V 5%
	VARIABLE RESISTORS	
R7, R8	5150153000	Semi-fixed, 5kΩ(B)
R9, R10	5150153000	Semi-fixed, 5kΩ(B)
R11, R12	5150153000	Semi-fixed, 5kΩ(B)
R47, R48	5053352000	Semi-fixed, 47kΩ(B)
R51, R52	5053348000	Semi-fixed, 10kΩ(B)
R53, R54	5053352000	Semi-fixed, 47kΩ(B)
R57, R58	5053356000	Semi-fixed, 22kΩ(B)
R59, R60	5053352000	Semi-fixed, 47kΩ(B)
R63, R64	5053412000	Semi-fixed, 33kΩ(B)
	COILS	
L1, L2	5286010200	Choke, 36mH
L3, L4	5286010200	Choke, 36mH
L5, L6	5286010200	Choke, 36mH
	MISCELLANEOUS	
P1	5336128600	Connector Plug, 6P (WHT)
P2	5336128300	Connector Plug, 3P (WHT)
P3	5336128800	Connector Plug, 8P (WHT)
	5800532100	Cushion

MIC AMPL. PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200102820	PCB Assy [J, GE, E, UK, A]
	5200102830	PCB Assy [US, C]
	5210102803	PCB [J, GE, E, UK, A]
	5210102903	PCB [US, C]
	IC's	
U181, U281	5220411100	NJM4560DX
U182, U282	6048649000	NJM386D
U183	5232251200	DTC-124N
U300	5232251200	DTC-124N
U301	5232251100	DTA-124N
	TRANSISTORS	
U180, U280	5232006100	FET 2SK270GR
Q300, Q310	5145185000	2SD655E
Q301	5145151000	2SC1815GR
	DIODES	
D300, D310	5224015020	1SS133T-77
D301, D311	5224015020	1SS133T-77
D302	5224015020	1SS133T-77
D303	5224015020	1SS133T-77
D304	5224013210	DS135D
	CARBON RESISTORS All resistors are rated ±5% tolerance and 1/8 watt.	
R180, R280	5240030620	10kΩ
R181, R281	5240033020	100kΩ
R182, R282	5240029020	2.2kΩ
R183, R283	5240029020	2.2kΩ
R184, R284	5240029420	3.3kΩ
R185, R285	5240025820	100Ω
R186, R286	5240026620	220Ω
R187, R287	5240026620	220Ω
R188, R288	5240026620	220Ω
R189, R289	5240026620	220Ω
R190, R290	5240031620	27kΩ
R191, R291	5240028620	1.5kΩ
R192, R292	5240028220	1kΩ
R193, R293	5240029820	4.7kΩ
R194, R294	5240033020	100kΩ
R195, R295	5240031420	22kΩ
R196, R296	5240027420	470Ω
R197, R297	5240029820	4.7kΩ
R198	5240030620	10kΩ
R298	5240032220	47kΩ
R300, R310	5240033020	100kΩ
R301, R311	5240031020	15kΩ
R302, R312	5240021820	2.2Ω
R303, R313	5240028220	1kΩ
R305	5240030020	5.6kΩ
R306	5240030020	5.6kΩ
R316	5240031420	22kΩ
R308, R318	5240033020	100kΩ
R309, R319	5240031420	22kΩ
R320, R321	5240028220	1kΩ
R322	5240031820	33kΩ
R323	5240031420	22kΩ
	CAPACITORS	
C180, C280	5260253650	Elec. 4.7μF 25V BP
C181, C281	5172236000	Ceramic 0.01μF 50V

REF. NO.	PARTS NO.	DESCRIPTION
C182, C282	5260162550	Elec. 10μF 16V
C183, C283	5172236000	Ceramic 0.01μF 50V
C184, C284	5260162550	Elec. 10μF 16V
C185, C285	5260165952	Elec. 100μF 10V
C186, C286	5260162550	Elec. 10μF 16V
C187, C287	5260162550	Elec. 10μF 16V
C188, C288	5172208000	Ceramic 47pF 50V
C189, C289	5170360000	Mylar 0.0022μF 100V 5%
C190, C290	5260253650	Elec. 4.7μF 25V BP
C191, C291	5260253650	Elec. 4.7μF 25V BP
C192, C292	5172200000	Ceramic 10pF 50V
C193, C293	5260253650	Elec. 4.7μF 25V BP
C300, C310	5260162550	Elec. 10μF 16V
C301, C311	5260162550	Elec. 10μF 16V
C302, C312	5173071000	Elec. 470μF 10V
C303, C313	5173071000	Elec. 470μF 10V
C304, C314	5171872000	Mylar 0.047μF 100V 5%
C305	5173070000	Elec. 470μF 6.3V
	VARIABLE RESISTORS	
R199	5150157000	Semi-fixed, 100kΩ (B)
R304	5150156000	Semi-fixed, 50kΩ (B)
R307	5150156000	Semi-fixed, 50kΩ (B)
	MISCELLANEOUS	
L180, L280	5160107000	Coil, Choke; 1.2mH
K300	5061137000	Relay, LAB2L; 12V
P180	5336126400	Connector Plug, 4P (WHT)
P181	5336137400	Connector Plug, 4P (BLK)
P182	5336126600	Connector Plug, 6P (WHT)
P183	5336145400	Connector Plug, 4P (YEL)
P184	5336126300	Connector Plug, 3P (WHT)
P185	5336126200	Connector Plug, 2P (WHT)
P186	5336135400	Connector Plug, 4P (RED)
P187	5336137200	Connector Plug, 2P (BLK)
P188	5336145200	Connector Plug, 2P (YEL)
P189	5336135500	Connector Plug, 5P (RED)

AUTO BIAS PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200100801	PCB Assy
	5210100801	PCB
	IC's	
U901	5220804300	MBL80C49NM-G-102
U902	5220020700	M50784SP
U903, U904	5220020600	M50781SP
U905	5220016800	HD14049UBP
U906, U907	6048661000	M54517P
U908	5293000900	Transistor Array, TD62504P
U910	6048973000	MC14042B
U911~U913	5232251200	DTC-124N
U914~U929	5232251100	DTA-124N
U930	5232251200	DTC-124N
U931, U031	5220416200	M5218L
U932, U032	5220416200	M5218L
U933	5220416200	M5218L
U937	5232251100	DTA-124N
U938~U940	5232251200	DTC-124N
	TRANSISTORS	
Q901	5145150000	2SA1015GR
Q902	5145151000	2SC1815GR
Q931, Q031	5232005800	FET, 2SK117GR
Q932, Q032	5232005800	FET, 2SK117GR
Q933, Q033	5232005800	FET, 2SK117GR
Q934, Q034	5232005800	FET, 2SK117GR
Q935, Q035	5145185000	2SD655E
Q936, Q036	5232005800	FET, 2SK117GR
Q937, Q037	5232005800	FET, 2SK117GR
Q938, Q038	5145185000	2SD655E
Q939, Q039	5232005800	FET, 2SK117GR
Q940, Q040	5232005800	FET, 2SK117GR
Q941, Q041	5230775000	2SC2878B
Q942, Q042	5230775000	2SC2878B
Q943, Q043	5230775000	2SC2878B
Q944, Q044	5230775000	2SC2878B
Q945, Q045	5230775000	2SC2878B
	DIODES	
D901, D902	5143118000	1S2473HJ
D903	5224013210	DS135D
D904	5224015000	1SS133
D905	5224015200	MC921
D906, D907	5143118000	1S2473HJ
D931, D031	5143118000	1S2473HJ
D932, D032	5143118000	1S2473HJ
D933, D033	5143118000	1S2473HJ
D934	5143118000	1S2473HJ
D935	5143118000	1S2473HJ
	CARBON RESISTORS All resistors are rated ±5% tolerance and 1/4 watt.	
R901	5181554000	1MΩ
R902	5181530000	100kΩ
R903~R906	5181482000	1kΩ
R907	5181506000	10kΩ
R908, R909	5181522000	47kΩ

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

Z-7000

REF. NO.	PARTS NO.	DESCRIPTION		
R910~R923	5181462000	150Ω		
R924~R929	5181506000	10kΩ		
R930	5181514000	22kΩ		
R932, R032	5181568000	10MΩ		
R933, R033	5181568000	10MΩ		
R934, R034	5181530000	100kΩ		
R935, R035	5181486000	1.5kΩ		
R936, R036	5181530000	100kΩ		
R937, R037	5181506000	10kΩ		
R938, R038	5181530000	100kΩ		
R939, R039	5181482000	1kΩ		
R940, R040	5181498000	4.7kΩ		
R941, R041	5181514000	22kΩ		
R942, R042	5181514000	22kΩ		
R943, R043	5181568000	10MΩ		
R944, R044	5181498000	4.7kΩ		
R945, R045	5181482000	1kΩ		
R946, R046	5181530000	100kΩ		
R947, R047	5181486000	1.5kΩ		
R948, R048	5181530000	100kΩ		
R949, R049	5181482000	1kΩ		
R950, R050	5181505000	9.1kΩ		
R951, R051	5181530000	100kΩ		
R952, R052	5181482000	1kΩ		
R953, R053	5181498000	4.7kΩ		
R954, R054	5181514000	22kΩ		
R955, R055	5181514000	22kΩ		
R956, R056	5181498000	4.7kΩ		
R957, R057	5181482000	1kΩ		
R958, R058	5181530000	100kΩ		
R959, R059	5181494000	3.3kΩ		
R960, R060	5181486000	1.5kΩ		
R961, R061	5181568000	10MΩ		
R962, R062	5181568000	10MΩ		
R963, R063	5181496000	3.9kΩ		
R964, R064	5181504000	8.2kΩ		
R965, R065	5181514000	22kΩ		
R966, R066	5181518000	33kΩ		
R967, R067	5181526000	68kΩ		
R968	5181530000	100kΩ		
R969	5181530000	100kΩ		
R970, R070	5181530000	100kΩ		
R971, R071	5181522000	47kΩ		
R972, R072	5181530000	100kΩ		
R973, R073	5181522000	47kΩ		
R974, R074	5181530000	100kΩ		
R975, R075	5181522000	47kΩ		
R976, R076	5181530000	100kΩ		
R977, R077	5181522000	47kΩ		
R978, R078	5181530000	100kΩ		
R979, R079	5181522000	47kΩ		
R980	5181482000	1kΩ		
R981	5181514000	22kΩ		
R982	5181434000	10Ω		
R983	5181506000	10kΩ		
CAPACITORS				
C901	5172236000	Ceramic	0.01μF	50V
C902	5260166152	Elec.	100μF	25V
C903, C904	5054742000	Dip. Mica	47pF	50V
C905	5054746000	Dip. Mica	330pF	50V
C906	5172236000	Ceramic	0.01μF	50V

REF. NO.	PARTS NO.	DESCRIPTION			
C907~C909	5054656100	Dip. Tant.	10μF	16V	
C910	5172236000	Ceramic	0.01μF	50V	
C911	5054656100	Dip. Tant.	10μF	16V	
C912	5172236000	Ceramic	0.01μF	50V	
C913~C915	5054656100	Dip. Tant.	10μF	16V	
C916	5260166852	Elec.	220μF	10V	
C917	5260221950	Elec.	10μF	16V	
C919	5260221150	Elec.	1μF	50V	
C931, C031	5260066550	Elec.	4.7μF	35V	BP
C932, C032	5054742000	Dip. Mica	47pF	50V	
C933, C033	5054740000	Dip. Mica	10pF	50V	
C934, C034	5263169113	Meta.	1μF	50V	5%
C935, C035	5260066550	Elec.	4.7μF	35V	BP
C936, C036	5054740000	Dip. Mica	10pF	50V	
C937, C037	5054740000	Dip. Mica	10pF	50V	
C938, C038	5263169113	Meta.	1μF	50V	5%
C939	5260165952	Elec.	100μF	10V	
C940	5054656100	Dip. Tant.	10μF	16V	
C941	5260160750	Elec.	1μF	50V	
C942	5054232000	Ceramic	0.1μF	25V	
VARIABLE RESISTORS					
R931, R031	5150156000	Semi-fixed, 50kΩ(B)			
MISCELLANEOUS					
U934, U935	5242111700	Resistor Array, 10kΩ x 8			
U936	5242111400	Resistor Array, 10kΩ x 5			
CR91	5347001300	Ceramic Resonator, KBR-6.0M			
P951	5336141400	Connector Plug, 4P (BLK)			
P952	5336129000	Connector Plug, 10P (WHT)			
P953	5336128500	Connector Plug, 5P (WHT)			
P954	5336145500	Connector Plug, 5P (YEL)			
P955	5336139200	Connector Plug, 2P (RED)			
P956	5336139400	Connector Plug, 4P (RED)			
P957	5336139500	Connector Plug, 5P (RED)			
P958	5336141300	Connector Plug, 3P (BLK)			
P959	5336126200	Connector Plug, 2P (WHT)			
P960	5336128900	Connector Plug, 9P (WHT)			
P961	5336128400	Connector Plug, 4P (WHT)			
P962	5336135900	Connector Plug, 9P (RED)			
P963	5336137500	Connector Plug, 5P (BLK)			
P964	5336128300	Connector Plug, 3P (WHT)			
P965	5336126600	Connector Plug, 6P (WHT)			
TP1~TP13	5544750000	Pin, Combination			

COUNTER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200100900	PCB Assy
	5210100902	PCB
IC's		
U1	5220804700	μPD80C49C-063
U2	5220021100	M50780SP
U3	5220019700	LC7800
U4	5220021300	HD74LS221P
U5	5220021400	HD74LS375P
U6	5220021400	HD74LS375P
U7	6048661000	M54517P
U8	5232250500	Transistor Array, M54560P
U9	5232250700	Transistor Array, M54533P
U10	5232250500	Transistor Array, M54560P
U11	6048661000	M54517P
U12	5232250700	Transistor Array, M54533P
U13	5232250500	Transistor Array, M54560P
U14	5232250800	Transistor Array, M54516P
U15	5220017200	HD14069UBP
U16	5147055000	NJM2403D
U17	5220019800	HD14584B
U22	5220016100	HD14013BP
U23	5220017800	HD14538BP
U27	5232251200	DTC-124N
U28	5232251100	DTA-124N
U29	5232251200	DTC-124N
U30	5232251100	DTA-124N
U31	5232251200	DTC-124N
U32	5232251100	DTA-124N
TRANSISTORS		
Q1	5042553000	2SA733P
Q2	5042625000	2SC1318S
Q3	5042553000	2SA733P
Q4	5145129000	2SB507B
Q5	5042553000	2SA733P
Q6	5042553000	2SA733P
Q7	5145091000	2SC945AK
Q8	5042553000	2SA733P
Q9	5145091000	2SC945AK
DIODES		
D1	5224013210	DS135D
D3	5224012920	1S2473FT
D4~D6	5224013210	DS135D
D7~D14	5224012920	1S2473FT
D15	5224013210	DS135D
D16, D17	5224012920	1S2473FT
D18	5143121000	Zener, RD4.7EB
D20	5224013210	DS135D
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt.		
R1	5181434000	10kΩ
R2	5181506000	5.6kΩ
R3	5181500000	4.7Ω
R4	5181426000	33kΩ
R5	5181518000	560Ω

REF. NO.	PARTS NO.	DESCRIPTION		
R6	5181476000	560Ω		
R7	5181500000	5.6kΩ		
R8	5181500000	5.6kΩ		
R9	5181506000	10kΩ		
R11	5181482000	1kΩ		
R12	5181500000	5.6kΩ		
R13	5181454000	68Ω		
R14	5181486000	1.5kΩ		
R15	5181489000	2kΩ		
R16	5181530000	100kΩ		
R17	5181516000	27kΩ		
R18	5181500000	5.6kΩ		
R19	5181554000	1MΩ		
R20~R23	5181482000	1kΩ		
R24	5181500000	5.6kΩ		
R25, R26	5181506000	10kΩ		
R27	5181489000	2kΩ		
R28, R29	5181514000	22kΩ		
R30~R35	5181462000	150Ω		
R36~R39	5181460000	120Ω		
R40	5181476000	560Ω		
R41	5181438000	15Ω		
R42	5181482000	1kΩ		
R43	5181442000	22Ω		
R44~R46	5181506000	10kΩ		
R47	5181490000	2.2kΩ		
R48	5181500000	5.6kΩ		
R49, R50	5181476000	560Ω		
R51~R53	5181530000	100kΩ		
R54, R55	5181478000	680Ω		
R56	5181506000	10kΩ		
R57, R58	5181530000	100kΩ		
R59	5181470000	330Ω		
R60, R61	5181482000	1kΩ		
R63, R64	5181458000	100Ω		
CAPACITORS				
C1, C2	5054656100	Dip. Tant.	10μF	16V
C3	5173433000	Ceramic	0.01μF	50V
C4	5054656100	Dip. Tant.	10μF	16V
C5	5173433000	Ceramic	0.01μF	50V
C6	5054656100	Dip Tant.	10μF	16V
C7	5173433000	Ceramic	0.01μF	50V
C8	5054656100	Dip. Tant.	10μF	16V
C9, C10	5260163452	Elec.	22μF	25V
C11	5173433000	Ceramic	0.01μF	50V
C12	5054656100	Dip. Tant.	10μF	16V
C13, C14	5173433000	Ceramic	0.01μF	50V
C15	5054656100	Dip. Tant.	10μF	16V
C16	5173433000	Ceramic	0.01μF	50V
C17, D18	5172204000	Ceramic	22pF	50V
C19	5172212000	Ceramic	100pF	50V
C20	5054260000	Dip. Mica	180pF	50V
C22~C24	5054656100	Dip. Tant.	10μF	16V
C25	5260160750	Elec.	1μF	50V
C26	5260161550	Elec.	3.3μF	50V
C30~C32	5260160750	Elec.	1μF	50V
C33	5260162550	Elec.	10μF	16V
C34	5260160750	Elec.	1μF	50V

Z-7000

REF. NO.	PARTS NO.	DESCRIPTION
	MISCELLANEOUS	
U18	5242114900	Resistor Array, 100kΩ x 7
U19, U20	5242114800	Resistor Array, 100kΩ x 6
U21	5242114700	Resistor Array, 10kΩ x 8
CR1	5347001700	X'tal Resonator, NC-18C, 8MHZ
L1, L2	5160082000	Coil, Choke; 10μH
K1	5061137000	Relay, LAB21; 12V
BT1	5347001400	Battery
TP1~TP3	5544750000	Pin, Combination
P1	5336137400	Connector Plug, 4P (BLK)
P2	5336145500	Connector Plug, 5P (YEL)
P3	5336126300	Connector Plug, 3P (WHT)
P4	5336128700	Connector Plug, 7P (WHT)
P5	5336128600	Connector Plug, 6P (WHT)
P6	5336139700	Connector Plug, 7P (RED)
P7	5336128500	Connector Plug, 5P (WHT)
P8	5336139500	Connector Plug, 5P (RED)
P9	5336139300	Connector Plug, 3P (RED)
P10	5336145300	Connector Plug, 3P (YEL)
P11	5336145600	Connector Plug, 6P (YEL)
P12	5336137400	Connector Plug, 4P (BLK)
P13	5336128400	Connector Plug, 4P (WHT)
P14	5336139400	Connector Plug, 4P (RED)
P15	5336141400	Connector Plug, 4P (BLK)
P16	5336139600	Connector Plug, 6P (RED)
P17	5336135200	Connector Plug, 2P (RED)
P18	5336137200	Connector Plug, 2P (BLK)
P19	5336145200	Connector Plug, 2P (YEL)
P20	5336147400	Connector Plug, 4P (YEL)
P21	5336137300	Connector Plug, 3P (BLK)
P22	5336126200	Connector Plug, 2P (WHT)

DOLBY PCB ASSY

REF. NO.	PART NO.	DESCRIPTION
	5200101600	PCB Assy [J, GE, E, UK, A]
	5200101610	PCB Assy [US, C]
	5210101602	PCB [J, GE, E, UK, A]
	5210101702	PCB [US, C]
	IC's	
U301, U401	5220417500	NE654N
U302, U402	5220417400	NE652N
U304, U404	5220417400	NE652N
U305, U405	5042738000	NJM4558D
	TRANSISTORS	
Q301, Q401	5145036000	2SC945LK
Q302, Q402	5145036000	2SC945LK
Q303	5145150000	2SA1015GR
Q304, Q404	5145151000	2SC1815GR
Q305	5145150000	2SA1015GR
Q306, Q406	5145151000	2SC1815GR
Q307, Q407	5145151000	2SC1815GR
Q308, Q408	5145151000	2SC1815GR
Q309, Q409	5145151000	2SC1815GR
	DIODES	
D301, D401	5224541501	Zener, RD7.5EB2
	CARBON RESISTORS	
	All resistors are rated ±5% tolerance and 1/8 watt unless otherwise noted.	
R302, R402	5240029420	3.3kΩ
R303, R403	5240029420	3.3kΩ
R304, R404	5240029120	2.4kΩ
R305, R405	5240030020	5.6kΩ
R306, R406	5240029420	3.3kΩ
R307, R407	5240029420	3.3kΩ
R308, R408	5240029420	3.3kΩ
R309, R409	5240029420	3.3kΩ
R310, R410	5240028220	1kΩ
R311, R411	5240032620	68kΩ
R312	5240029920	5.1kΩ
R313	5240029020	2.2kΩ
R314	5240029820	4.7kΩ
R315	5240032220	47kΩ
R316	5240030820	12kΩ
R317, R417	5240034220	330kΩ
R318, R418	5240032720	75kΩ
R319, R419	5240034420	390kΩ
R320, R420	5240034420	390kΩ
R321, R421	5240034220	330kΩ
R322, R422	5240032820	82kΩ
R323, R423	5240033020	100kΩ
R324, R424	5240033020	100kΩ
R325, R425	5240033020	100kΩ
R326	5183554000	10Ω ¼W Nonflammable
R327	5240030620	10kΩ
R328	5240030620	10kΩ
R330	5240031820	33kΩ
R331	5240031820	33kΩ
R332	5240025820	100Ω
R333, R433	5240031420	22kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R334, R434	5240029420	3.3kΩ
R335, R435	5240029420	3.3kΩ
R336, R436	5240028220	1kΩ
R337, R437	5240029420	3.3kΩ
R338, R438	5240029420	3.3kΩ
R339	5240035420	1MΩ
R340	5240033020	100kΩ
R341, R441	5240029020	2.2kΩ
R342, R442	5240029920	5.1kΩ
R343, R443	5240032620	68kΩ
R344, R444	5240031420	22kΩ
R345, R445	5240031420	22kΩ
R346, R446	5240029820	4.7kΩ
R347, R447	5240032220	47kΩ
R348, R448	5240030820	12kΩ
R349, R449	5240032720	75kΩ
R350, R450	5240034220	330kΩ
R351, R451	5240034420	390kΩ
R352, R452	5240034420	390kΩ
R353, R453	5240034220	330kΩ
R354, R454	5240032820	82kΩ
R355, R455	5240031420	22kΩ
R356, R456	5240031420	22kΩ
R357, R457	5240033020	100kΩ
R358, R458	5240033020	100kΩ
	CAPACITORS	
C301, C401	5263167923	Meta. 0.1μF 50V 5%
C302, C402	5260160750	Elec. 1μF 50V
C303, C403	5170358000	Mylar 0.0018μF 100V 5%
C304, C404	5170354000	Mylar 0.0012μF 100V 5%
C305, C405	5170358000	Mylar 0.0018μF 100V 5%
C306, C406	5172208000	Ceramic 47pF 50V
C307, C407	5263166723	Meta. 0.01μF 50V 5%
C308, C408	5260162550	Elec. 10μF 16V
C309, C409	5260160750	Elec. 1μF 50V
C311, C411	5263167323	Meta. 0.033μF 50V
C312, C412	5260162550	Elec. 10μF 16V
C313, C413	5263102110	Polypro. 0.0047μF 100V 5%
C314, C414	5263102110	Polypro. 0.0047μF 100V 5%
C315, C415	5263167323	Meta. 0.033μF 50V 5%
C316, C416	5263167923	Meta. 0.1μF 50V 5%
C317, C417	5263168123	Meta. 0.15μF 50V 5%
C318, C418	5263167923	Meta. 0.1μF 50V 5%
C319, C419	5263167323	Meta. 0.033μF 50V 5%
C320, C420	5260167723	Meta. 0.068μF 50V 5%
C321, C421	5260162550	Elec. 10μF 16V
C322, C422	5263168323	Meta. 0.22μF 50V 5%
C323, C423	5263167523	Meta. 0.047μF 50V 5%
C324, C424	5173054800	Elec. 220μF 16V
C326	5260165252	Elec. 47μF 25V
C330, C431	5260160750	Elec. 1μF 50V
C331, C431	5260162550	Elec. 10μF 16V
C332	5260163452	Elec. 22μF 25V
C333, C433	5170358000	Mylar 0.0018μF 100V 5%
C334, C434	5263166723	Meta. 0.01μF 50V 5%
C335, C435	5263167323	Meta. 0.033μF 50V 5%
C336, C436	5260162550	Elec. 10μF 16V
C337, C437	5263102110	Polypro. 0.0047μF 100V 5%

REF. NO.	PARTS NO.	DESCRIPTION
C338, C438	5263102110	Polypro. 0.0047μF 100V 5%
C339, C439	5263167323	Meta. 0.033μF 50V 5%
C340, C440	5263167923	Meta. 0.1μF 50V 5%
C341, C441	5263168123	Meta. 0.15μF 50V 5%
C342, C442	5263167923	Meta. 0.1μF 50V 5%
C343, C553	5263167323	Meta. 0.033μF 50V 5%
C344, C444	5263167723	Meta. 0.068μF 50V 5%
C345, C445	5260162550	Elec. 10μF 16V
C346, C446	5263168323	Meta. 0.22μF 50V 5%
C347, C447	5263167523	Meta. 0.047μF 50V 5%
	MISCELLANEOUS	
U303, U403	5292802600	Filter, Low-pass
L301, L401	5286010200	Coil, Choke; 36mH
L302, L402	5286010200	Coil, Choke; 36mH
P301	5336128400	Connector Plug, 4P(WHT)
P302	5336139400	Connector Plug, 4P(RED)
P303	5336147400	Connector Plug, 4P(YEL)
P304	5336141400	Connector Plug, 4P(BLK)
P305	5336128300	Connector Plug, 3P(WHT)
P306	5336128200	Connector Plug, 2P(WHT)
TP1, TP2	5544750000	Pin, Combination

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

DBX PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200101800	PCB Assy [J, GE, E, UK, A]
	5200101810	PCB Assy [US, C]
	5210101801	PCB [J, GE, E, UK, A]
	5210101901	PCB [US, C]
	IC's	
U700, U800	5220414501	μPC1252H2
U701, U801	5220414601	μPC1253H2
U702	5042738000	NJM4558D
U703, U803	5220414501	μPC1252H2
U704, U804	5220414601	μPC1253H2
U705	5042738000	NJM4558D
U706	6048639000	NJM78L12A
U707	5220418600	LM79L12ACZ
	TRANSISTORS	
Q700, Q800	5145151000	2SC1815GR
Q701, Q801	5145151000	2SC1815GR
Q702, Q802	5145151000	2SC1815GR
Q703, Q803	5145151000	2SC1815GR
Q704, Q804	5232005800	FET 2SK117GR
	DIODES	
D700, D800	5224015020	1SS133T-77
D702	5224013210	DS135D
	CARBON RESISTORS	
	All resistors are rated ±5% tolerance and 1/8 watt unless otherwise noted.	
R700, R800	5240175800	1.5MΩ ¼w
R701, R801	5240025820	100Ω
R702, R802	5240031720	30kΩ
R703, R803	5240033320	130kΩ
R704, R804	5240030020	5.6kΩ
R705, R805	5240031820	33kΩ
R706, R806	5240030620	10kΩ
R707, R807	5240029620	3.9kΩ
R708, R808	5240030620	10kΩ
R709, R809	5240025120	51Ω
R710, R810	5240033020	100kΩ
R712, R812	5240030620	10kΩ
R713, R813	5240031820	33kΩ
R714, R814	5240025820	100Ω
R715, R815	5240033020	100kΩ
R716, R816	5240032920	91kΩ
R717, R817	5240029820	4.7kΩ
R718, R818	5240031820	33kΩ
R719, R819	5240031820	33kΩ
R720, R820	5240030220	6.8kΩ
R721, R821	5240029820	4.7kΩ
R722, R822	5183168000	10MΩ ¼W
R723, R823	5240033020	100kΩ
R725, R825	5240029420	3.3kΩ
R726, R826	5240031820	33kΩ
R728, R828	5240033420	150kΩ
R729, R829	5181558000	1.5MΩ ¼W
R730, R830	5240033820	220kΩ
R731, R731	5240023420	10Ω
R732, R832	5240024220	22Ω

REF. NO.	PARTS NO.	DESCRIPTION
R733, R833	5183168000	10MΩ ¼W
R734, R834	5240028220	1kΩ
R735, R835	5240031420	22kΩ
R736, R836	5240032020	39kΩ
R740, R840	5240175800	1.5MΩ ¼W
R741, R841	5240025820	100Ω
R742, R842	5240031720	30kΩ
R743, R843	5240033320	130kΩ
R744, R844	5240030020	5.6kΩ
R745, R845	5240031820	33kΩ
R746, R846	5240030620	10kΩ
R747, R847	5240029620	3.9kΩ
R748, R848	5240030620	10kΩ
R749, R849	5240025120	51Ω
R750, R850	5240033020	100kΩ
R752, R852	5240030620	10kΩ
R753, R853	5240031820	33kΩ
R754, R854	5240025820	100Ω
R755, R855	5240033020	100kΩ
R856, R856	5240032920	91kΩ
R757, R857	5240029820	4.7kΩ
R758, R858	5240031820	33kΩ
R759, R859	5240031820	33kΩ
R760, R860	5240030220	6.8kΩ
R761, R861	5240029820	4.7kΩ
R762, R862	5183168000	10MΩ ¼W
R763, R863	5240033020	100kΩ
R764, R864	5240033020	100kΩ
R765, R865	5240029420	3.3kΩ
R766, R866	5240031820	33kΩ
R768, R868	5240033420	150kΩ
R769, R869	5181558000	1.5MΩ ¼W
R770, R870	5240033820	220kΩ
R771, R871	5240023420	10Ω
R772, R872	5240024220	22Ω
R773, R873	5183168000	10MΩ ¼W
R774, R874	5240028220	1kΩ
R775, R875	5240031420	22kΩ
R776, R876	5240032020	39kΩ
R778	5240030620	10kΩ
R779	5240030620	10kΩ
R780	5240031720	30kΩ
	CAPACITORS	
C700, C800	5263167923	Meta. 0.1μF 50V 5%
C701, C801	5263167923	Meta. 0.1μF 50V 5%
C702, C802	5263169523	Meta. 0.3μF 50V 5%
C703, C803	5263166723	Meta. 0.01μF 50V 5%
C704, C804	5263105410	Polypro. 100pF 100V 5%
C705, C805	5263105410	Polypro. 100pF 100V 5%
C706, C806	5260067050	Elec. 10μF 16V BP
C707, C807	5263167923	Meta. 0.1μF 50V 5%
C708, C808	5263167923	Meta. 0.1μF 50V 5%
C709, C809	5170364000	Mylar 0.0033μF 100V 5%
C710, C810	5170364000	Mylar. 0.0033μF 100V 5%
C711, C811	5263106610	Polypro. 330pF 100V 5%
C712, C812	5263167923	Meta. 0.1μF 50V 5%
C713, C813	5263166723	Meta. 0.01μF 50V 5%
C714, C814	5263169113	Meta. 1μF 50V 5%

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

REF. NO.	PARTS NO.	DESCRIPTION
C715, C815	5260227010	Elec. 10μF 35V (LL)
C716, C816	5260162550	Elec. 10μF 16V
C717	5260165252	Elec. 47μF 25V
C718	5260165252	Elec. 47μF 25V
C720, C820	5263167923	Meta. 0.1μF 50V 5%
C721, C821	5263167923	Meta. 0.1μF 50V 5%
C722, C822	5263169523	Meta 0.3μF 50V 5%
C723, C823	5263106110	Polypro. 200pF 100V 5%
C724, C824	5263166723	Meta. 0.01μF 50V 5%
C725, C825	5263105410	Polypro. 100pF 100V 5%
C726, C826	5260067050	Elec. 10μF 16V BP
C727, C827	5263167923	Meta. 0.1μF 50V 5%
C728, C828	5263167923	Meta. 0.1μF 50V 5%
C729, C829	5170364000	Mylar 0.0033μF 100V 5%
C730, C830	5170364000	Mylar 0.0033μF 100V 5%
C731, C831	5263106610	Polypro. 330pF 100V 5%
C732, C832	5263167923	Meta. 0.1μF 50V 5%
C733, C833	5263166723	Meta. 0.01μF 50F 5%
C734, C834	5263169113	Meta. 1μF 50V 5%
C735, C835	5260227010	Elec. 10μF 35V (LL)
C736, C836	5260162550	Elec. 10μF 16V
C737, C837	5260160750	Elec. 1μF 50V
C738	5173433000	Ceramic 0.01μF 50V
	VARIABLE RESISTORS	
R711, R811	5150094000	Semi-fixed, 50kΩ(B)
R727, R827	5150159000	Semi-fixed, 500kΩ(B)
R737, R837	5150094000	Semi-fixed, 50kΩ(B)
R751, R851	5150094000	Semi-fixed, 50kΩ(B)
R767, R867	5150159000	Semi-fixed, 500kΩ(B)
R777, R877	5150094000	Semi-fixed, 50kΩ(B)
	MISCELLANEOUS	
P700	5336128400	Connector Plug, 4P(WHT)
P701	5336139400	Connector Plug, 4P(RED)
P702	5336147400	Connector Plug, 4P(YEW)
P703	5336141400	Connector Plug, 4P(BLK)
P704	5336128200	Connector Plug, 2P(WHT)
P705	5336128300	Connector Plug, 3P(WHT)
TP1~TP5	5544750000	Pin, Combination

SYSTEM CONTROL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200101400	PCB Assy [J, GE, E, UK, A]
	5200101410	PCB Assy [US, C]
	5210101404	PCB [J, GE, E, UK, A]
	5210101504	PCB [US, C]
	IC's	
U400	5232250500	Transistor Array, M54560P
U401	5220418000	LA2000
U402	5220019700	LC7800
U403	5220418500	M54545L
U404	5232250500	Transistor Array, M54560P
U405	5220804800	M88841M-G-1196M
U406	6048661000	M54517P
U407	5220020500	LB1475
U408, U409	5232251200	DTC-124N
	TRANSISTORS	
Q400~Q402	5230506700	2SB941Q
Q403	5231759200	2SD1265P
Q404	5230779720	2SC945A-KA
Q405	5230017920	2SA733A-PB
Q406~Q408	5230779720	5SC945A-KA
Q409, Q410	5230777700	2SC2120Y
Q411	5230016100	2SA950Y
Q412~Q415	5230779720	2SC945A-KA
Q416~Q417	5230014000	2SA1020Y
Q418~Q422	5230779720	2SC945A-KA
Q423~Q432	5230017920	2SA733A-PB
Q433, Q434	5230779720	2SC945A-KA
	DIODES	
D400	5224540901	Zener, RD6.2EB2
D401	5224539701	Zener, RD4.2EB2
D402	5224543101	Zener, RD12EB2
D403~D406	5224013210	DS135D
D407	5224540901	Zener, RD6.2EB2
D408	5143118000	1S2473HJ
D409	5042517000	1S2473VE
D410	5224543401	Zener, RD13EB2
D411	5143118000	1S2473HJ
D412	5224013210	DS135D
D414, D415	5143118000	1S2473HJ
D416	5042517000	1S2473VE
D418	5143118000	1S2473HJ
D419	5224542101	Zener, RD9.1EB2
D420~D423	5143118000	1S2473HJ
D424, D425	5224013210	DS135D
D427	5224539301	Zener, RD3.6EB2
D428	5143118000	1S2473HJ
	RESISTORS	
	All resistors are rated ±5% tolerance, ¼ watt and are carbon type unless otherwise noted.	
R413	5181458000	100Ω
R414	5181490000	2.2kΩ
R415	5240173400	150kΩ
R416	5181474000	470Ω
R417	5181506000	10kΩ
R418	5181462000	150Ω

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

REF. NO.	PARTS NO.	DESCRIPTION	
R419	5181478000	680Ω	
R420	5181506000	10kΩ	
R421	‡ 5184298000	1.8Ω	2W Cement 10%
R422	‡ 5184576000	27Ω	1W Metal film
R423	‡ 5184307000	10Ω	2W Cement 10%
R424	5181482000	1kΩ	
R425	5181474000	470Ω	
R426, R427	5181506000	10kΩ	
R428	5181482000	1kΩ	
R429	5181506000	10kΩ	
R430	5181496000	3.9kΩ	
R431	5181482000	1kΩ	
R432, R433	5181514000	22kΩ	
R434	5181474000	470Ω	
R435	5181486000	1.5kΩ	
R436	5240172200	47kΩ	
R437	5181506000	10kΩ	
R438	5181518000	33kΩ	
R440, R441	5181506000	10kΩ	
R442	5181474000	470Ω	
R443	5181514000	22kΩ	
R444	5181474000	470Ω	
R445	5181514000	22kΩ	
R446, R447	5181482000	1kΩ	
R449	5240174000	270kΩ	
R450~R453	5181506000	10kΩ	
R454	5181482000	1kΩ	
R456	5181491000	2.4kΩ	
R457	5181534000	150kΩ	
R458	5184948000	4.7kΩ	2%
R459	5181462000	150Ω	
R462	5181534000	150kΩ	
R464	5181506000	10kΩ	
R465~R472	5181510000	15kΩ	
R473	5181482000	1kΩ	
R474~R476	5181506000	10kΩ	
R477~R484	5181530000	100kΩ	
R485	5181476000	560Ω	
R486	5181506000	10kΩ	
R487	5181482000	1kΩ	
R488	5181502000	6.8kΩ	
R489	5181506000	10kΩ	
CAPACITORS			
C400	5260162050	Elec. 4.7μF	35V
C401	5172236000	Ceramic 0.01μF	50V
C402	5260165252	Elec. 47μF	25V
C403, C404	5172236000	Ceramic 0.01μF	50V
C405	5260162050	Elec. 4.7μF	3.5V
C406, C407	5172236000	Ceramic 0.01μF	50V
C408	5260162050	Elec. 4.7μF	35V
C409	5172236000	Ceramic 0.01μF	50V
C410	5260162050	Elec. 4.7μF	35V
C411	5172236000	Ceramic 0.01μF	50V
C412	5260162050	Elec. 4.7μF	35V
C413	5172236000	Ceramic 0.01μF	50V
C414, C415	5260162050	Elec. 4.7μF	35V
C416	5054666100	Dip. Tant. 0.22μF	35V
C417, C418	5260160550	Elec. 0.47μF	50V

REF. NO.	PARTS NO.	DESCRIPTION	
C419, C420	5260162050	Elec. 4.7μF	35V
C421	5172236000	Ceramic 0.01μF	50V
C423, C424	5172306000	Ceramic 33pF	50V
C425	5260162050	Elec. 4.7μF	35V
C426	5172236000	Ceramic 0.01μF	50V
C427	5170352000	Mylar 0.001μF	100V
C428	5260162550	Elec. 10μF	16V
VARIABLE RESISTORS			
R410~R412	5280170602	Semi-fixed, 200Ω(B)	
R448	5150155000	Semi-fixed, 20kΩ(B)	
MISCELLANEOUS			
CR40	5347001000	Ceramic Resonator, KBR4.0M	
L400	5160094000	Coil, Choke; 100μH	
P410	5336141700	Connector Plug, 7P(BLK)	
P411	5336139300	Connector Plug, 3P(RED)	
P412	5336139800	Connector Plug, 8P(RED)	
P413	5336128400	Connector Plug, 4P(WHT)	
P414	5336128800	Connector Plug, 8P(WHT)	
P415	5336128200	Connector Plug, 2P(WHT)	
TP1	5544750000	Pin, Combination	

AMPL. CONTROL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200102020	PCB Assy [J, GE, E, UK, A]
	5200102030	PCB Assy [US, C]
	5210102004	PCB [J, GE, E, UK, A]
	5210102104	PCB [US, C]
IC's		
U330	5220019700	LC7800
U331	5220804200	HD44750A64
U332	5220016800	HD14049UBP
U333	5220025900	HD14011BP
U334	6048661000	M54517P
U335	5232250800	Transistor Array, M54516P
U336~U338	6048661000	M54517P
U339	5220016800	HD14049UBP
U341~U344	5232251200	DTC-124N
TRANSISTORS		
Q330	5145150000	2SA1015GR
Q332	5145150000	2SA1015GR
Q333	5145151000	2SC1815GR
Q334~Q336	5145150000	2SA1015GR
Q337~Q339	5145151000	2SC1815GR
DIODES		
D330	5224015010	1SS133HV
D331	5224013200	DS135D
D332	5224013200	DS135D
D333~D335	5224015010	1SS133HV
CARBON RESISTORS		
All resistors are rated ±5% to tolerance and 1/8 watt.		
R319	5240025820	100Ω
R320	5240031420	22kΩ
R321, R322	5240030620	10kΩ
R323	5240028620	1.5kΩ
R324~R327	5240030620	10kΩ
R328~R330	5240033020	100kΩ
R332	5240032220	47kΩ
R334	5240029020	2.2kΩ
R335	5240033020	100kΩ
R336, R337	5240030620	10kΩ
R338	5240033020	100kΩ
R339	5240032220	47kΩ
R340	5240030620	10kΩ
R341	5240033020	100kΩ
R342	5240033820	220kΩ
R343	5240033020	100kΩ
R344	5240035420	1MΩ
R345	5240033020	100kΩ
R347	5240030620	10kΩ
CAPACITORS		
C330	5260162550	Elec. 10μF 16V
C331	5054689100	Dip. Tant. 11μF 25V
C332	5172236000	Ceramic 0.01μF 50V
C333	5260162050	Elec. 4.7μF 35V
C334	5172236000	Ceramic 0.01μF 50V
C335	5260165952	Elec. 100μF 10V
C336, C337	5172218000	Ceramic 330pF 50V
C338	5260162550	Elec. 10μF 16V
C339~C342	5054648100	Dip. Tant. 10μF 10V
C343	5260160750	Elec. 1μF 50V
C344	5054656100	Dip. Tant. 10μF 16V

REF. NO.	PARTS NO.	DESCRIPTION
MISCELLANEOUS		
CR33	5347001100	Ceramic Resonator, KBR-400B
L330~L332	5160094000	Coil, Choke; 100μH
P330	5336126800	Connector Plug, 8P(WHT)
P331	5336135800	Connector Plug, 8P(RED)
P332	5336126300	Connector Plug, 3P(WHT)
P333	5336135300	Connector Plug, 3P(RED)
P334	5336137800	Connector Plug, 8P(BLK)
P335	5336126900	Connector Plug, 9P(WHT)
P336	5336137300	Connector Plug, 3P(BLK)
P337	5336145900	Connector Plug, 9P(YEL)
P338	5336126400	Connector Plug, 4P(WHT)
P339	5336145300	Connector Plug, 3P(YEL)
P341	5336137200	Connector Plug, 2P(BLK)
P342	5336145200	Connector Plug, 2P(YEL)

CONTROL SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103200	PCB Assy
	5210103200	PCB
S410~S416	5302101800	Swtich, Tact
D450~D453	5225011500	LED, TLUG-163(GRN)
D454~D456	5225011600	LED, TLS-163(RED)
R400~R403	5181450000	Carbon Res., 47Ω ¼W 5%
R404~R406	5181460000	Carbon Res., 120Ω ¼W 5%

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K
[A]: AUSTRALIA [J]: JAPAN

FADER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200102600	PCB Assy [J, GE, E, UK, A]
	5200102610	PCB Assy [US, C]
	5210102601	PCB [J, GE, E, UK, A]
	5210102701	PCB [US, C]
	IC's	
U350	5220418400	HA12022
U351	5220405000	μPC4557C
U352	5147055000	NJM2403D
U353, U354	5220015700	HD14001BP
U355	5220411100	NJM4560DX
U356, U357	5232251200	DTC-124N
	TRANSISTORS	
Q350	5145151000	2SC1815GR
Q351	5145150000	2SA1015GR
Q352~Q356	5145151000	2SC1815GR
	DIODES	
D350, D351	5224015010	1SS133HV
D352	5224013210	DS135D
D353~D355	5224015010	1SS133HV
	CARBON RESISTORS All resistors are rated ±5% tolerance and 1/8 watt unless otherwise noted.	
R341	5240026220	150Ω
R350, R351	5240033820	220kΩ
R352	5240072920	91kΩ 2%
R353, R354	5240034220	330kΩ
R355, R356	5240030620	10kΩ
R359	5240027620	560Ω
R360, R361	5240030020	5.6kΩ
R362, R363	5240030620	10kΩ
R364, R365	5240033020	100kΩ
R366~R369	5240031420	22kΩ
R370, R371	5240029620	3.9kΩ
R372, R373	5240029220	2.7kΩ
R374, R375	5240031420	22kΩ
R376, R377	5240030620	10kΩ
R378	5240028220	1kΩ
R379	5240030620	10kΩ
R380	5240032220	47kΩ
R381	5240030620	10kΩ
R382	5240029020	2.2kΩ
R383	5240033020	100kΩ
R384, R385	5240031420	22kΩ
R386	5240027020	330Ω
R387	5240031020	15kΩ
R388	5240032220	47kΩ
R389	5240030620	10kΩ
R390	5240033020	100kΩ
R391, R392	5240031420	22kΩ
R397, R398	5240029420	3.3kΩ
R399, R400	5240030620	10kΩ

REF. NO.	PARTS NO.	DESCRIPTION
	CAPACITORS	
C350, C351	5173072000	Elec. 470μF 16V
C352, C353	5172236000	Ceramic 0.01μF 50V
C354, C355	5260253650	Elec. 4.7μF 25V LLBP
C356, C357	5172200000	Ceramic 10pF 50V
C360, C361	5260255150	Elec. 10μF 25V LLBP
C362	5260160750	Elec. 1μF 50V
C363~C365	5260253650	Elec. 4.7μF 35V LLBP
C366	5260162750	Elec. 10μF 50V
C367	5260165052	Elec. 47μF 10V
C368	5260162550	Elec. 10μF 16V
	VARIABLE RESISTORS	
R393, R394	5150156000	Semi-fixed, 50kΩ(B)
R395, R396	5150154000	Semi-fixed, 10kΩ(B)
	MISCELLANEOUS	
RT330, RT331	5143128000	Thermistor, S5C34
P350	5336126400	Connector Plug, 4P (WHT)
P351	5336126500	Connector Plug, 5P (WHT)
P352	5336126600	Connector Plug, 6P (WHT)
P353	5336135400	Connector Plug, 4P (RED)
P354	5336126200	Connector Plug, 2P (WHT)
P355	5336126300	Connector Plug, 3P (WHT)
P356	5336145200	Connector Plug, 2P (YEL)

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

TEST TONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103000	PCB Assy
	5210103000	PCB
	IC's	
U451	5220418100	ICL8038CCJD
U452	5147024000	NJM4558DF
	TRANSISTORS	
Q451	5145151000	2SC1815GR
Q452, Q453	5145150000	2SA1015GR
Q454~Q457	5145151000	2SC1815GR
	DIODES	
D451, D452	5224541901	Zener, RD8.2EB3
	CARBON RESISTORS All resistors are rated ±5% tolerance and ¼ watt.	
R451~R456	5181522000	47kΩ
R457	5181530000	100kΩ
R459	5181514000	22kΩ
R560, R461	5181506000	10kΩ
R463~R470	5181522000	47kΩ
R471	5181506000	10kΩ
R473, R474	5181568000	10MΩ
R475, R476	5181466000	220Ω
R477, R478	5181498000	4.7kΩ
R479, R480	5181506000	10kΩ
	CAPACITORS	
C451	5171580000	Elec. 0.1μF 50V (LR)
C452	5170358800	Mylar 0.0018μF 100V 5%
C453	5170366000	Mylar 0.0039μF 100V 5%
C454	5170368800	Mylar 0.0047μF 100V 5%
C455	5171878000	Mylar 0.1μF 100V 5%
C456	5172236000	Ceramic 0.01μF 50V
C457	5260165252	Elec. 47μF 25V
C458	5172236000	Ceramic 0.01μF 50V
C459	5260165252	Elec. 47μF 25V
C461, C462	5260065650	Elec. 1μF 50V BP
	VARIABLE RESISTORS	
R458	5150154000	Semi-fixed, 10kΩ(B)
R462	5150151000	Semi-fixed, 1kΩ(B)
R472	5150157000	Semi-fixed, 100kΩ(B)
R483, R484	5150151000	Semi-fixed, 1kΩ(B)
	MISCELLANEOUS	
P451	5336128500	Connector Plug, 5P (WHT)
P452	5336128400	Connector Plug, 4P (WHT)
P453	5336139400	Connector Plug, 4P (RED)
P455	5336141400	Connector Plug, 4P (BLK)
TP1~TP8	5544750000	Pin, Combination

MECHANISM PCB (1) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103900	PCB Assy
	5210103900	PCB (1)
	IC	
U410	5220417800	LM556CN
	DIODES	
D440, D441	5224013210	DS135D
	CARBON RESISTORS All resistors are rated ±5% tolerance and ¼ watt. unless otherwise noted.	
R485	5181523000	51kΩ
R486	5184307000	10Ω 2W 10% Cement
R487, R488	5181518000	33kΩ
R489	5181516000	27kΩ
R490	5181522000	47kΩ
R491	5181494000	3.3kΩ
R492	5181496000	3.9kΩ
R493, R494	5181506000	10kΩ
R495	5181492000	2.7kΩ
	CAPACITORS	
C440, C441	5263156902	Meta. 0.1μF 100V 5%
C442	5260162050	Elec. 4.7μF 35V
C443~C445	5171856000	Mylar 0.01μF 100V 5%
C446	5263165613	Meta. 0.0012μF 100V 5%
C447	5263161413	Meta. 0.022μF 100V 5%
	VARIABLE RESISTORS	
R496	5150155000	Semi-fixed, 20kΩ (B)
R497	5150153000	Semi-fixed, 5kΩ (B)
	MISCELLANEOUS	
S400~S403	5300909400	Switch, Slide; 1-2
P421	5122153000	Connector Plug, 10P (WHT)
P422	5122146000	Connector Plug, 3P (WHT)
P423	5122148000	Connector Plug, 5P (WHT)
P424	5122454000	Connector Plug, 3P (RED)
P425	5122147000	Connector Plug, 4P (WHT)
P426	5122203000	Connector Plug, 3P (BLK)

MECHANISM PCB(2) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104000	PCB Assy
	5210104000	PCB(2)
S420	5302101900	Switch, Tact

MECHANISM PCB(3) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104100	PCB Assy
	5210104100	PCB(3)
	5310005500	Lamp, 6.3V 0.07A

PITCH CON PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104300	PCB Assy
	5210104300	PCB
	5282250300	Var. Res., 20kΩ(B)

HEADPHONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104700	PCB Assy
	5210104700	PCB
R82, R83	5282408800	Var. Res., 20kΩ(A) x 2

POWER SUPPLY PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200102400	PCB Assy [J, GE, E, UK, A]
	5200102410	PCB Assy [US, C]
	5210102402	PCB [J, GE, E, UK, A]
	5210102502	PCB [US, C]
		IC's
U50	5220418300	M5231L
U51	5220416400	M5230L
U52	5220418300	M5231L
U53	5220418300	M5231L
		TRANSISTORS
Q50	5145087000	2SD313E
Q51	5145150000	2SA1015GR
		DIODES
D50	5224541501	Zener RD7.5EB2
D51~D53	5224013210	DS135D (‡ D51 only)
		CARBON RESISTORS
		All resistors are rated ±5% tolerance and 1/8 watt unless otherwise noted.
R50	5240025820	100Ω
R51	5240029420	3.3kΩ
R52	5240029820	4.7kΩ
R54~R56	5240027620	560Ω
R57	5240069420	3.3kΩ 2%
R58	5240071520	24kΩ 2%
R59, R60	5240071020	15kΩ 2%
R61	5240030620	10kΩ
R62	5240033020	100kΩ
R63	5240030420	8.2kΩ
R64	‡ 5183572000	56Ω ¼W Nonflammable
R65	5240167600	560Ω ¼W
R66	5240029420	3.3kΩ
R67	5240032020	39kΩ
R69	5240027620	560Ω
R70	5240069420	3.3kΩ 2%
R71	5240071420	22kΩ 2%

REF. NO.	PARTS NO.	DESCRIPTION		
		CAPACITORS		
C50	‡ 5262001110	Elec.	4700μF	25V
C51	5260165252	Elec.	47μF	25V
C52	5172212000	Ceramic	100pF	50V
C53	5172236000	Ceramic	0.01μF	50V
C54	5260163252	Elec.	22μF	10V
C55	5260162550	Elec.	10μF	16V
C56, C57	‡ 5173083000	Elec.	1000μF	35V
C58, C59	5260165252	Elec.	47μF	25V
C60, C61	5260162050	Elec.	4.7μF	35V
C62~C64	5260162550	Elec.	10μF	16V
C65, C66	5172236000	Ceramic	0.01μF	50V
C67	‡ 5267010300	Ceramic	10000pF	500V
C68	5173054800	Elec.	220μF	16V
C69	5260166852	Elec.	220μF	10V
C70	5260165052	Elec.	47μF	10V
C71	5260160750	Elec.	1μF	50V
C72	‡ 5173084000	Elec.	1000μF	50V
C73	‡ 5173090000	Elec.	2200μF	35V
C74	5260165452	Elec.	47μF	50V
C75	5260165252	Elec.	47μF	25V
C76	5172212000	Ceramic	100pF	50V
C77	5260162550	Elec.	10μF	16V
C78	5260163552	Elec.	22μF	35V
C79	5172212000	Ceramic	100pF	50V
C80	5260162550	Elec.	10μF	16V
C81	5260163452	Elec.	22μF	25V

TRANSISTOR PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103500	PCB Assy
	5210103500	PCB
Q60, Q61	‡ 5145087000	Transistor, 2SD313E
Q62	‡ 5145129000	Transistor, 2SB507E
Q63, Q64	‡ 5145087000	Transistor, 2SD313E
	5033291000	Plate, Insulating, 1S-313D
	5033295000	Tube, Insulating; P

IN/OUTPUT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION			
	5200104210	PCB Assy			
	5210104202	PCB			
U91	5220411100	IC, NJM4560DX			
R91, R92	5240031420	Carbon Res., 22kΩ	1/8W	5%	
R93, R94	5240034220	Carbon Res., 330kΩ	1/8W	5%	
R95, R96	5240033020	Carbon Res., 100kΩ	1/8W	5%	
C91, C92	5260253650	Elec., 4.7μF	25V	BP	
	5061137000	Relay, 12V LAB2L			
	5330507800	Pin Jack, 4P			

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

VR PCB(1) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104400	PCB Assy
	5210104400	PCB(1)
	5284006700	Var. Res., Slide; 50kΩ(A)

VR PCB(2) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104500	PCB Assy
	5210104500	(PCB(2)
	5284006800	Var. Res., Slide; 20kΩ(A)

SENSOR PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200104600	PCB Assy
	5210104600	PCB
Q441, Q442	5228008300	Photo Transistor, PH-102K

DIODE PCB(1) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103600	PCB Assy
	5210103600	PCB(1)
D91	‡ 5228008000	Diode, DBA60C
C91	‡ 5267010300	Ceramic Cap. 10000pF 500V

DIODE PCB(2) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103700	PCB Assy
	5210103700	PCB(2)
D92	‡ 5228008000	Diode, DBA60C
C92, C93	‡ 5267010300	Ceramic Cap., 10000pF 500V

DIODE PCB(3) ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200103800	PCB Assy
	5210103800	PCB(3)
D93	‡ 5228008000	Diode, DBA60C
C94, C95	‡ 5267010300	Ceramic Cap. 10000pF 500V

CONDENSER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION	
	5200105600	PCB Assy	
	5210105600	PCB	
C96, C97	‡ 5262001110	Elec. Cap. 4700μF	25V
D94	‡ 5224013210	Diode, DS135D	
R90	‡ 5184225000	Carbon Resistor, 10Ω 5% Nonflammable	¼w

POWER SW PCB ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200104800	PCB Assy
	5210104800	PCB
	‡ 5300030800	Switch, Push; SDL-1P

FUSE PCB(1) ASSY [E, UK, A] (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION	
	5200103300	PCB Assy [E, UK, A]	
	5210103300	PCB(1)	
F1~F3	‡ 5142191000	Fuse, T3.15A	250V
F4	‡ 5041140000	Fuse, T1A	250V
F5, F6	‡ 5142194000	Fuse, T6.3A	250V
	5142087000	Holder, Fuse x 12	

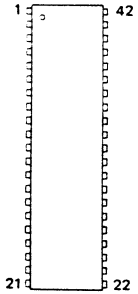
FUSE PCB(2) ASSY [US, C] (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION	
	5200103400	PCB Assy [US, C]	
	5210103401	PCB(2)	
F1~F3	‡ 5307004300	Fuse, 3A	250V
F4	‡ 5307003600	Fuse, 1A	250V
F5, F6	‡ 5307004700	Fuse, 7A	125V
	5041237000	Holder, Fuse x 12	

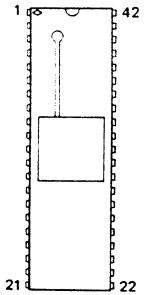
[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

SEMICONDUCTOR ELECTRODES

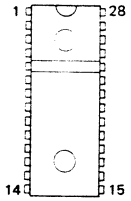
HD44750A64
(TOP VIEW)



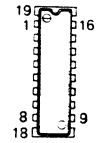
M88841M-G-1196M
MBL80C49NM-G-102
(TOP VIEW)



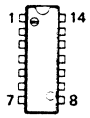
HA12020
(TOP VIEW)



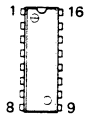
HA12022
(TOP VIEW)



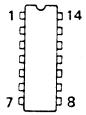
HD14001BP
HD14011BP
HD14013BP
HD14069UBP
HD14538BP
HD14584BP
(TOP VIEW)



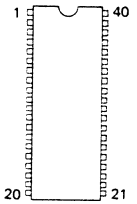
HD14049UBP
HD74LS221P
HD74LS375P
(TOP VIEW)



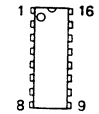
ICL8038CCJD
(TOP VIEW)



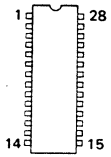
M50780SP
μPD80C49C-063
(TOP VIEW)



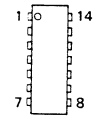
MC14042B
(TOP VIEW)



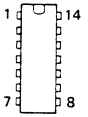
LC7800
M50781SP
M50784SP
(TOP VIEW)



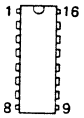
LM324N
LM556CN
(TOP VIEW)



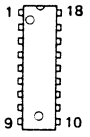
M54516P
(TOP VIEW)



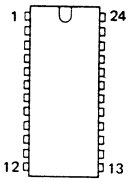
M54517P
M54533P
M54560P
(TOP VIEW)



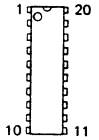
NE652N
(TOP VIEW)



NE654N
(TOP VIEW)



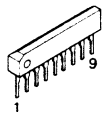
LB1475
(TOP VIEW)



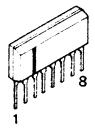
NJM2403D
NJM386D
NJM4558D
NJM4558DF
NJM4560DX
(TOP VIEW)

μPC4557C
(TOP VIEW)

LA2000

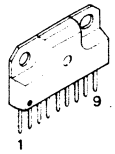


M5218L
M5230L

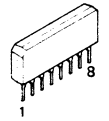


M5231L

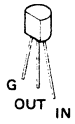
M54545L



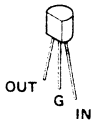
μPC1252H2
μPC1253H2



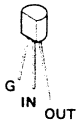
DTA124N
DTC124N



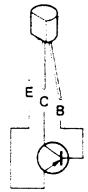
NJM78L12A



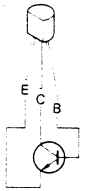
LM79L12ACZ



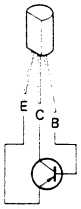
2SA1015GR
2SA733P
2SA733A-PB
2SA950Y



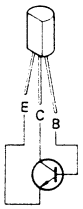
2SC1317R
2SC1318S
2SC1685R
2SC1815GR
2SC2120Y
2SC2878B
2SC945AK
2SC945LK
2SC945A-KA
2SD655E



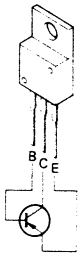
2SA1020Y



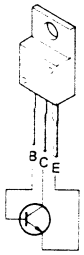
2SD1140



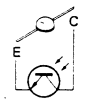
2SB507E



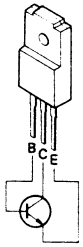
2SD313E



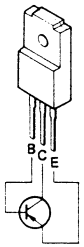
PH102K



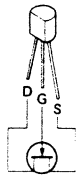
2SD1265P



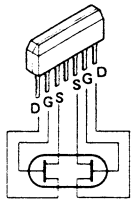
2SB941Q



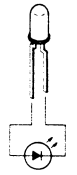
2SK117GR
2SK364BL



2SK270GR

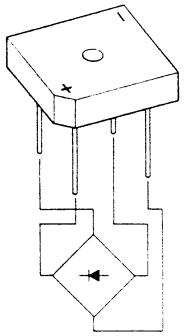


TLUG-163
TLS-163



Z-7000

DBA60C



MC921

1S2473

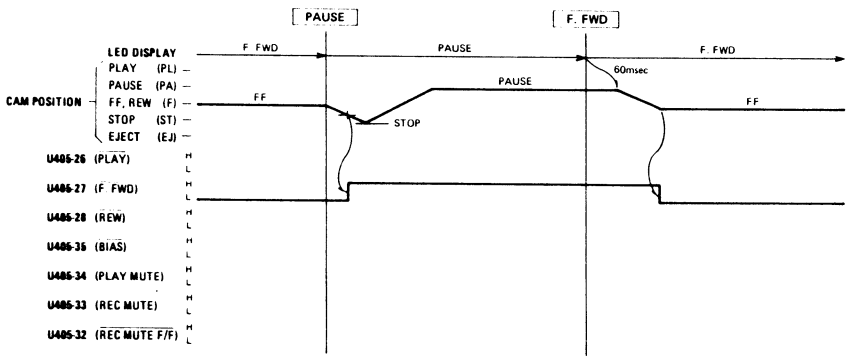
RD3.6EB2
RD4.2EB2
RD4.7EB
RD5.6EB2
RD6.2EB2
RD7.5EB2
RD8.2EB2
RD9.1EB2
RD12EB2
RD13EB2
RD13EB2

1SS133T-77
1SS133HV

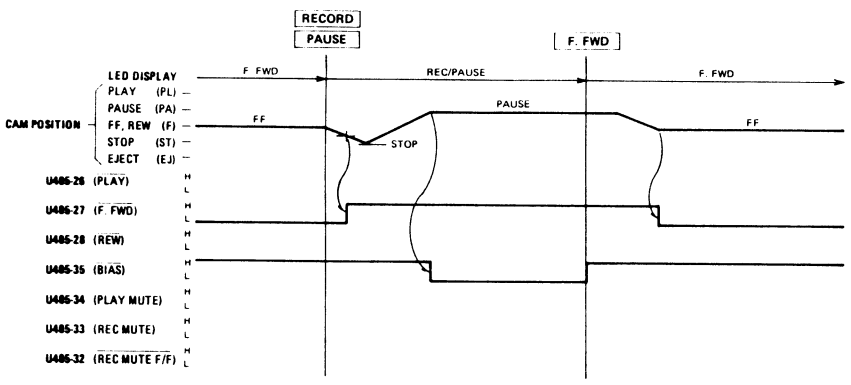
DS135D

SYSTEM CONTROL IC TIMING CHART

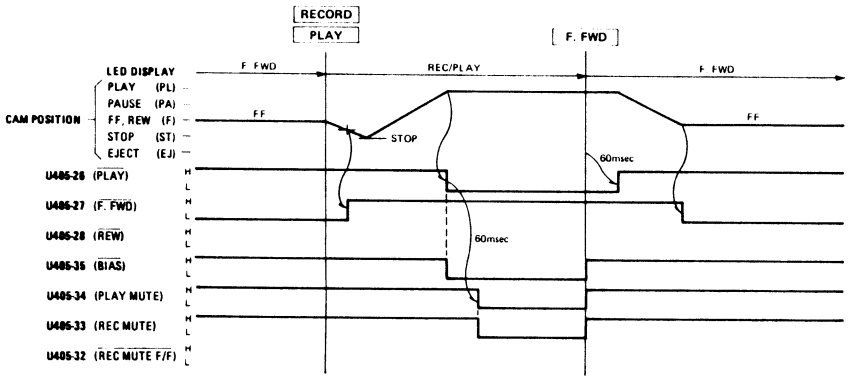
F.FWD ⟶ PAUSE ⟶ F.FWD



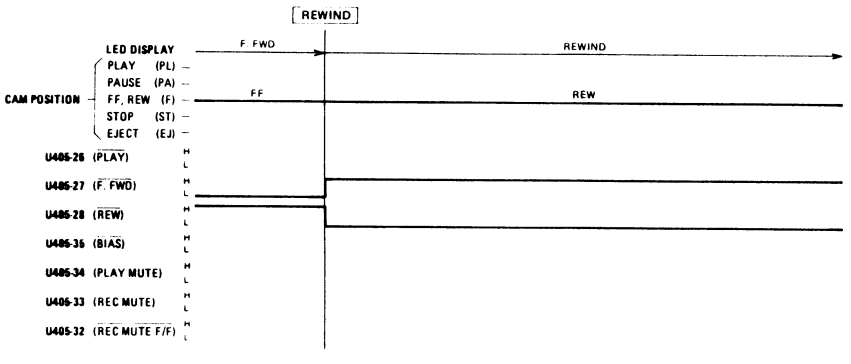
F.FWD ⟶ REC/PAUSE ⟶ F.FWD



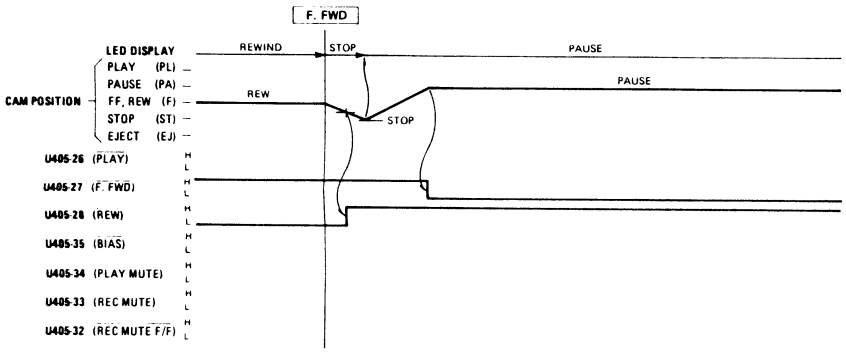
F.FWD ⟶ REC/PLAY ⟶ F.FWD



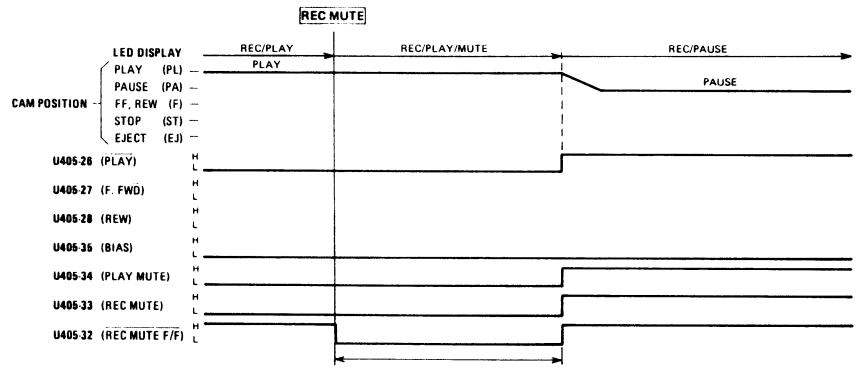
F.FWD ⟶ REWIND



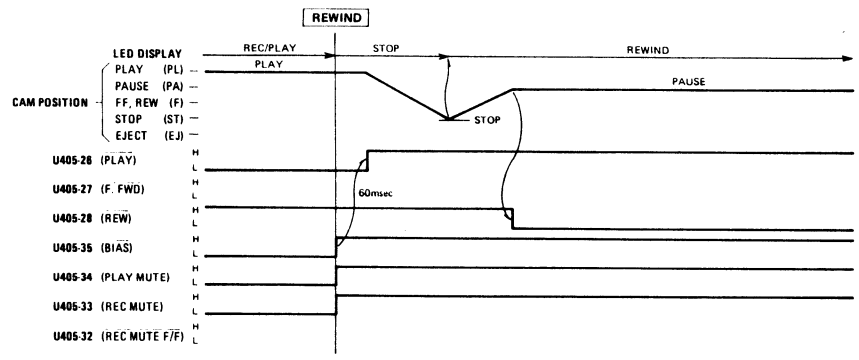
REWIND ⟶ F.FWD (CPS COUNT ≠ 0)



REC/PLAY ⟶ MUTE



REC/PLAY ⟶ REWIND (CPS COUNT ≠ 0)

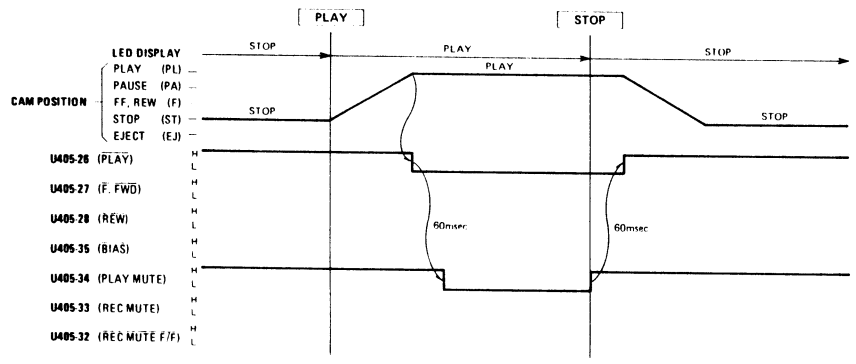


TRANSPORT FUNCTION TABLE

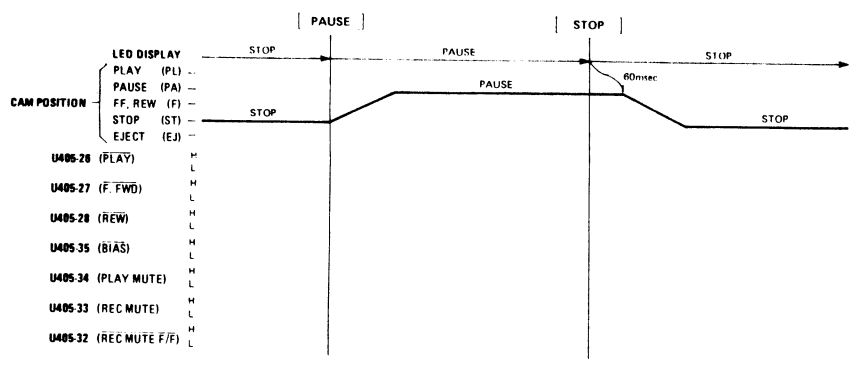
Current mode / Switch input	STOP	PLAY	F.FWD	REWIND	PAUSE	REC/PLAY	REC/PAUSE	CPSFF	CPSREW	SCAN	REC/MUTE
STOP		STOP	STOP	STOP	STOP	STOP	STOP	STOP	STOP	STOP	STOP
PLAY	PLAY		PLAY	PLAY	PLAY		REC/PLAY	PLAY	PLAY	PLAY	REC/PLAY
F.FWD CPS COUNT = 0	F.FWD	F.FWD		F.FWD	F.FWD	F.FWD	F.FWD	F.FWD	F.FWD	F.FWD	F.FWD
F.FWD CPS COUNT ≠ 0	CPSFF	CPSFF	CPSFF	CPSFF	CPSFF	CPSFF	CPSFF	F.FWD	F.FWD	CPSFF	CPSFF
REWIND CPS COUNT = 0	REW	REW	REW		REW	REW	REW	REW	REW	REW	REW
REWIND CPS COUNT ≠ 0	CPSREW	CPSREW	CPSREW	CPSREW	CPSREW	CPSREW	CPSREW	REW	REW	CPSFF	CPSFF
PAUSE	PAUSE	PAUSE	PAUSE	PAUSE		REC/PAUSE		PAUSE	PAUSE	PAUSE	REC/PAUSE
REC/PLAY	REC/PLAY	REC/PLAY	REC/PALY	REC/PALY	REC/PLAY		REC/PLAY	REC/PLAY	REC/PLAY	REC/PLAY	REC/PLAY
REC/PAUSE	REC/PAUSE	REC/PAUSE	REC/PAUSE	REC/PAUSE	REC/PAUSE	REC/PAUSE		REC/PAUSE	REC/PAUSE	REC/PAUSE	REC/PAUSE
INTRO CHECK	SCAN	SCAN	SCAN	SCAN	SCAN	SCAN	SCAN	SCAN	SCAN		SCAN
REC MUTE						REC/MUTE					

SYSTEM CONTROL IC TIMING CHART

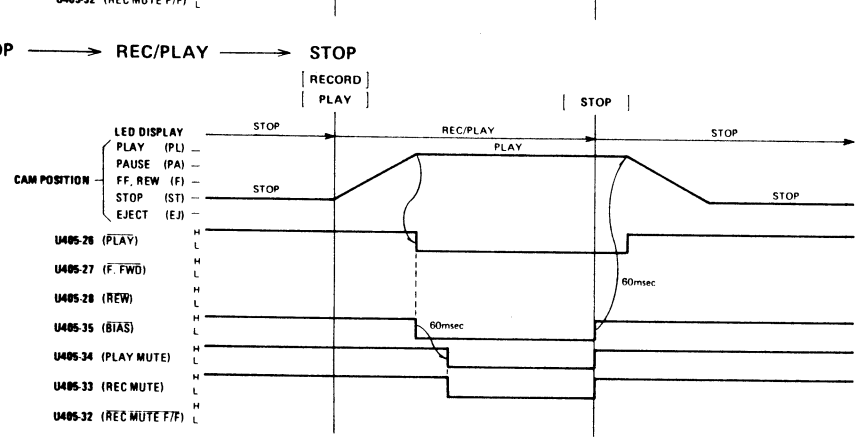
STOP → PLAY → STOP



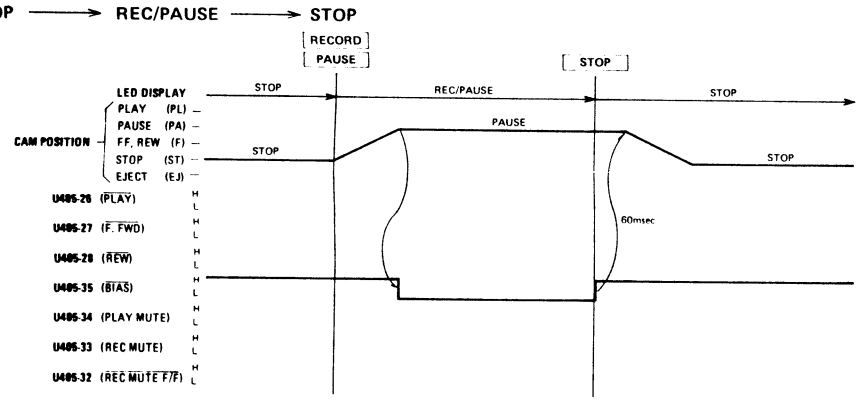
STOP → PAUSE → STOP



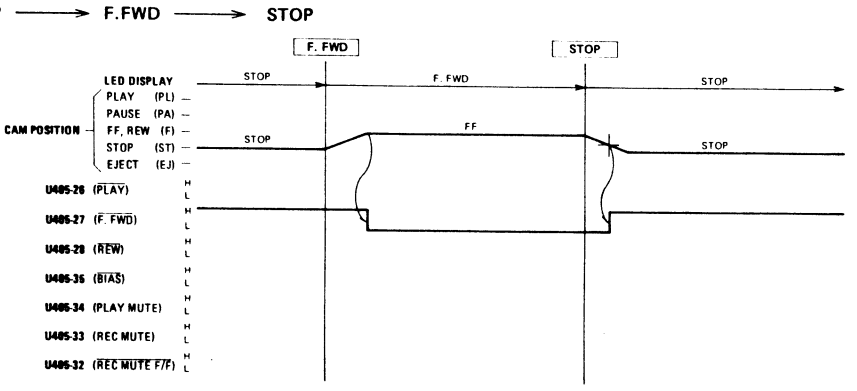
STOP → REC/PLAY → STOP



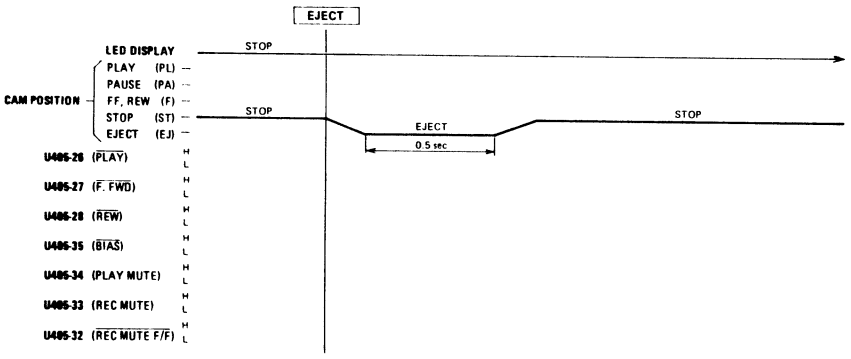
STOP → REC/PAUSE → STOP



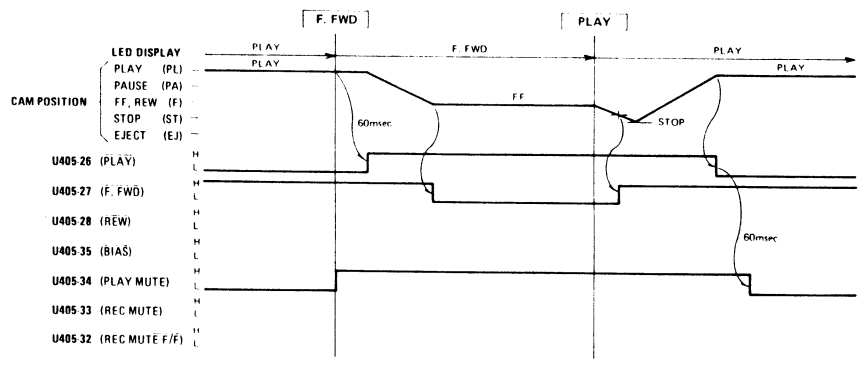
STOP → F.FWD → STOP



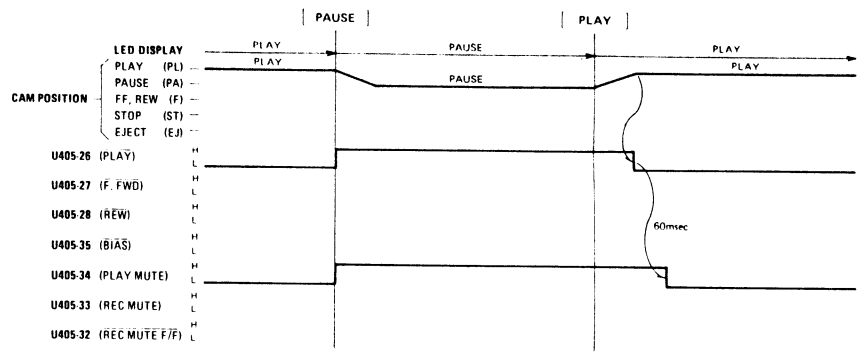
STOP → EJECT



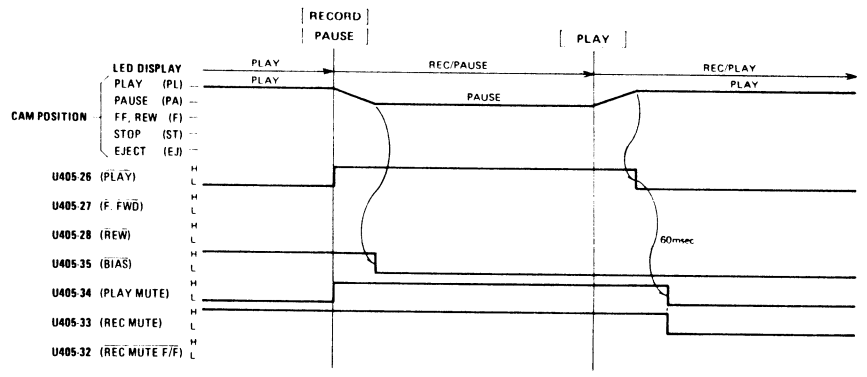
PLAY → F.FWD → PLAY



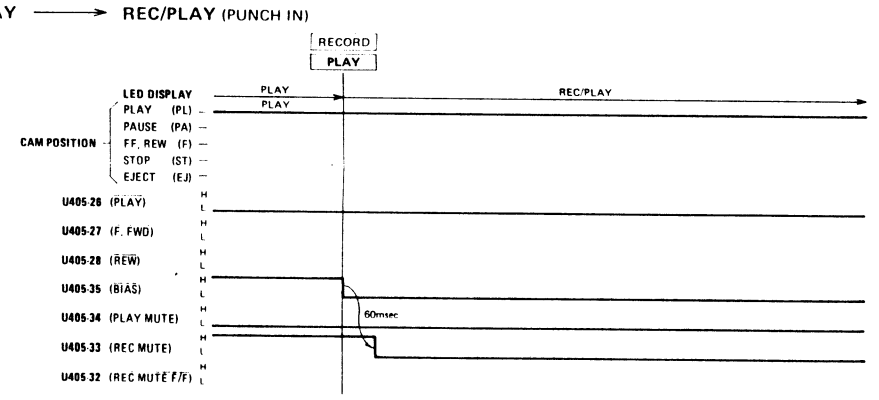
PLAY → PAUSE → PLAY



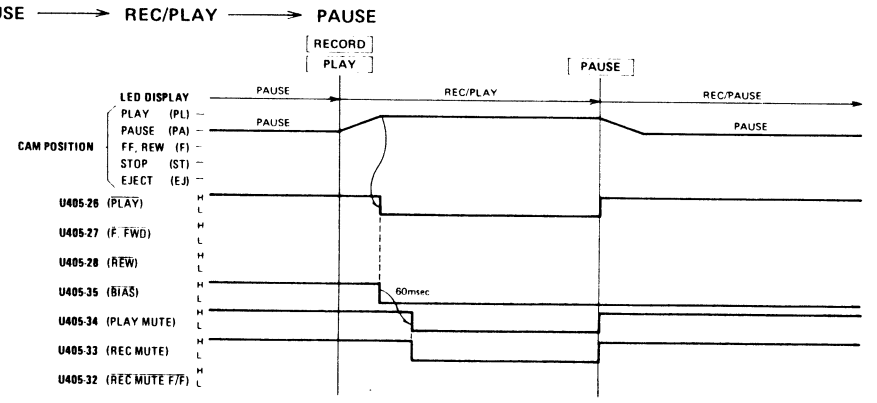
PLAY → REC/PAUSE → PLAY



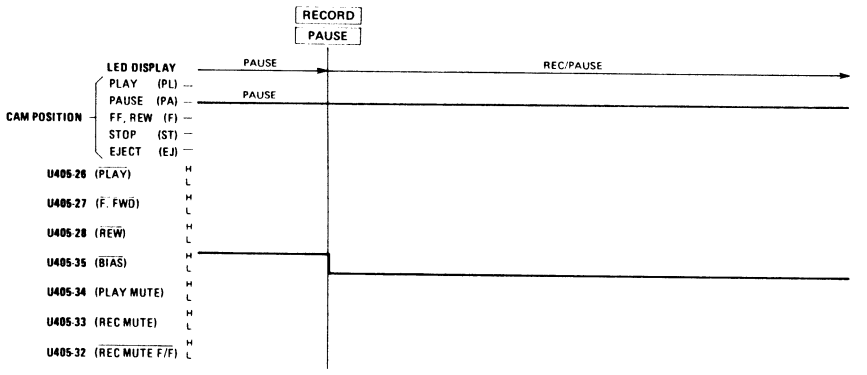
PLAY → REC/PLAY (PUNCH IN)



PAUSE → REC/PLAY → PAUSE

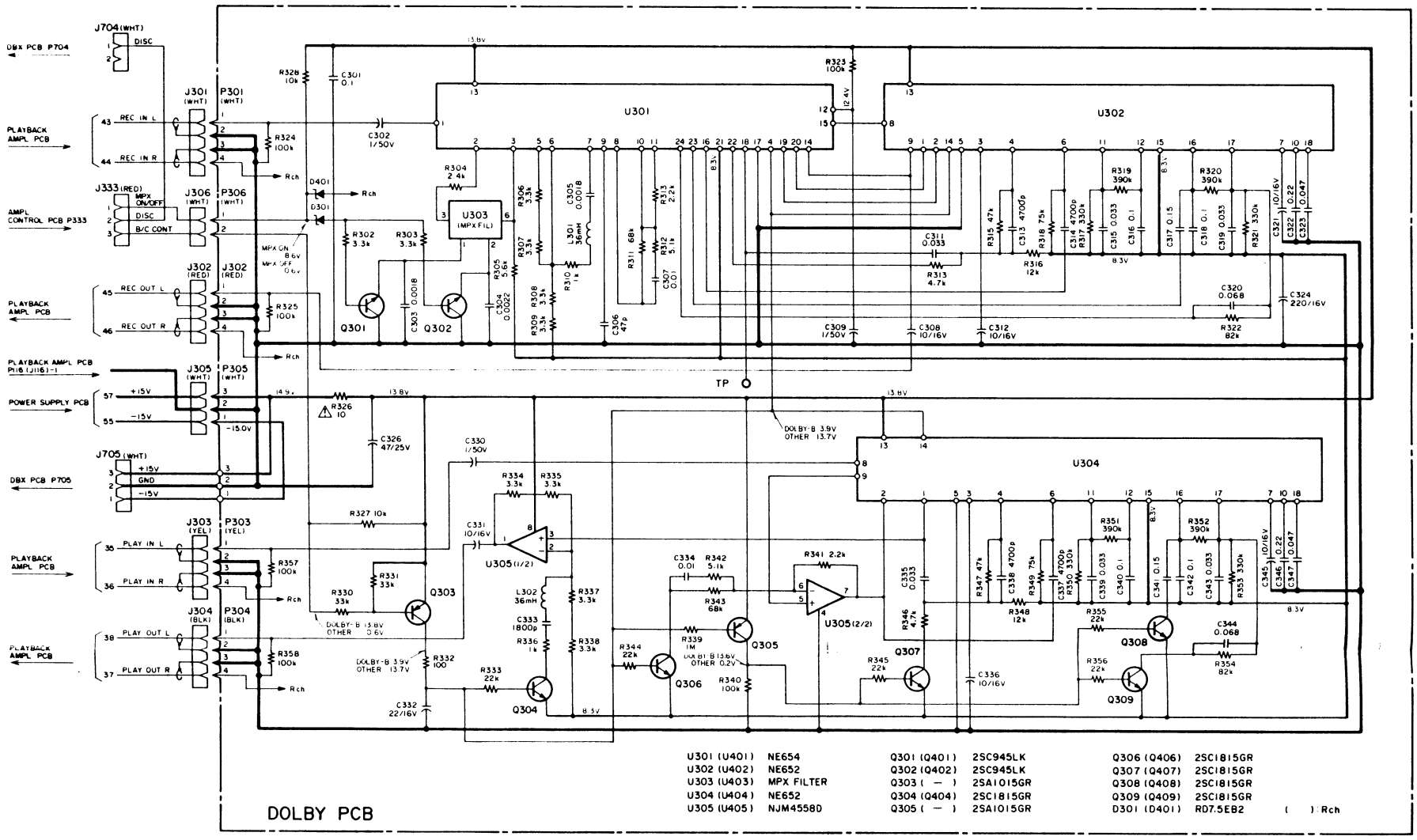


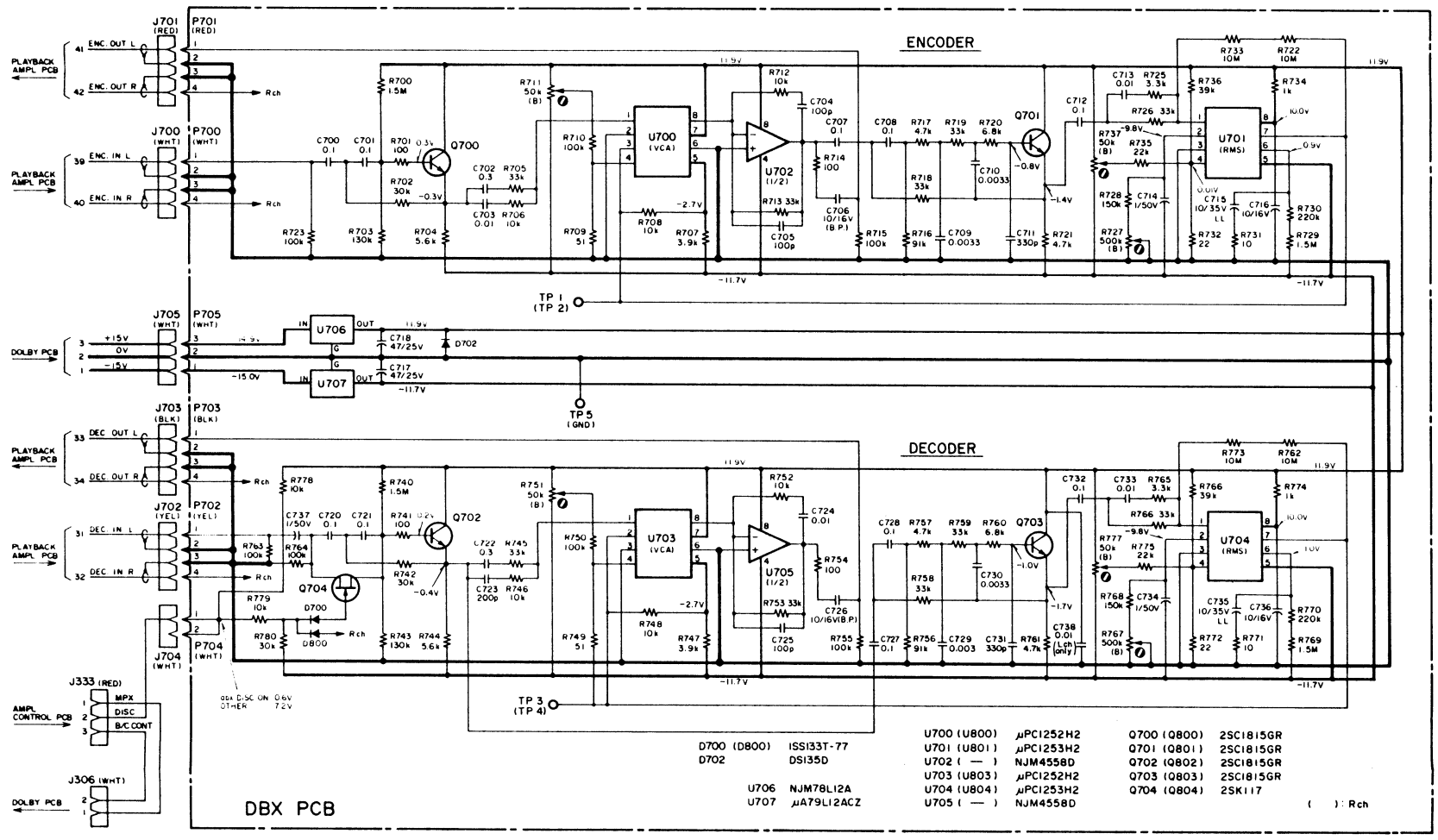
PAUSE → REC/PAUSE



Z-7000 Master Cassette Deck

TEAC SCHEMATIC DIAGRAM Z-7000





- Unless otherwise specified, DBX PCB voltage value refers to DBX IN.
- DBX PCBの電圧値は、特記の無い限りDBX動作時の値です。

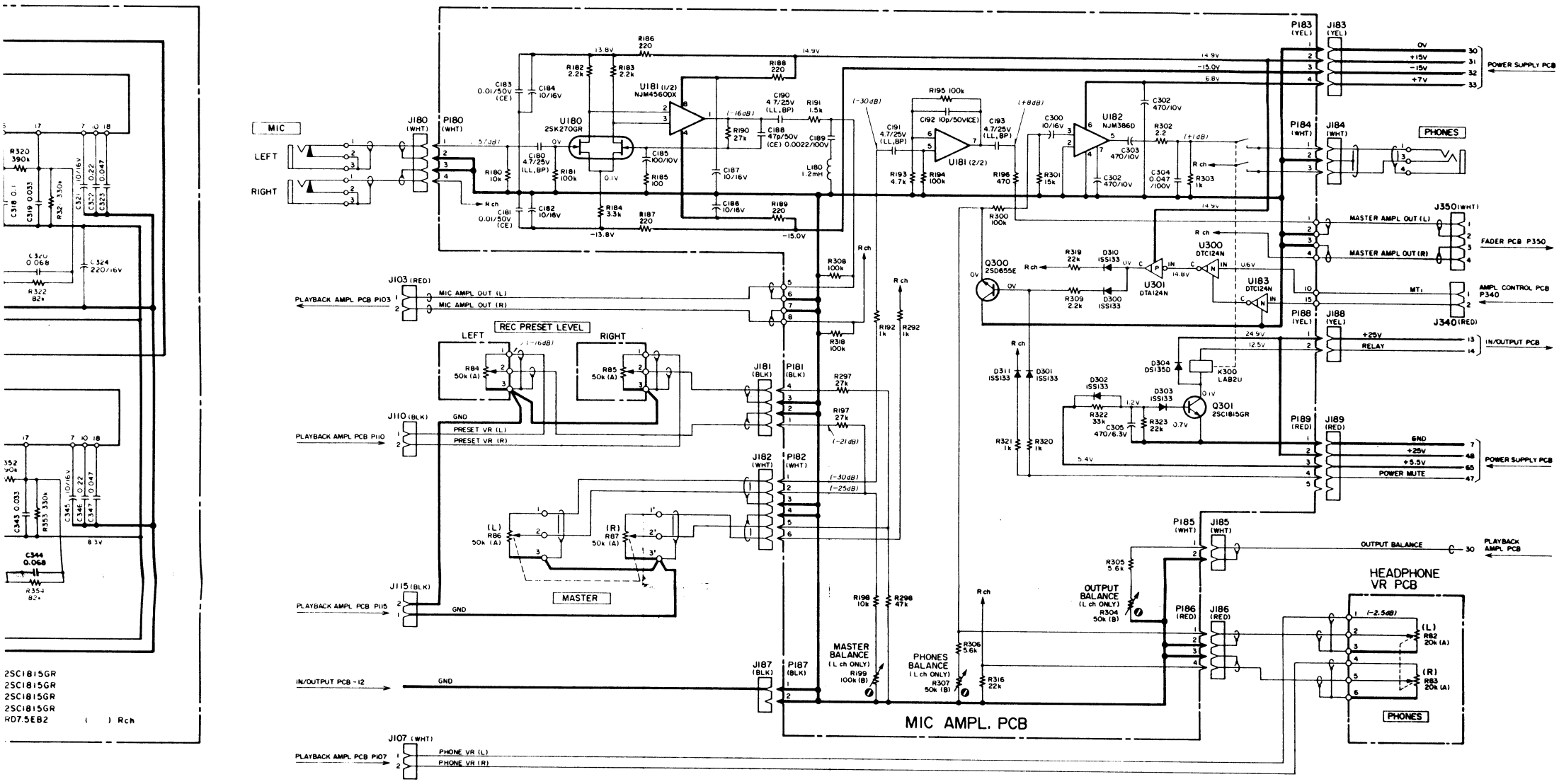
NOTES

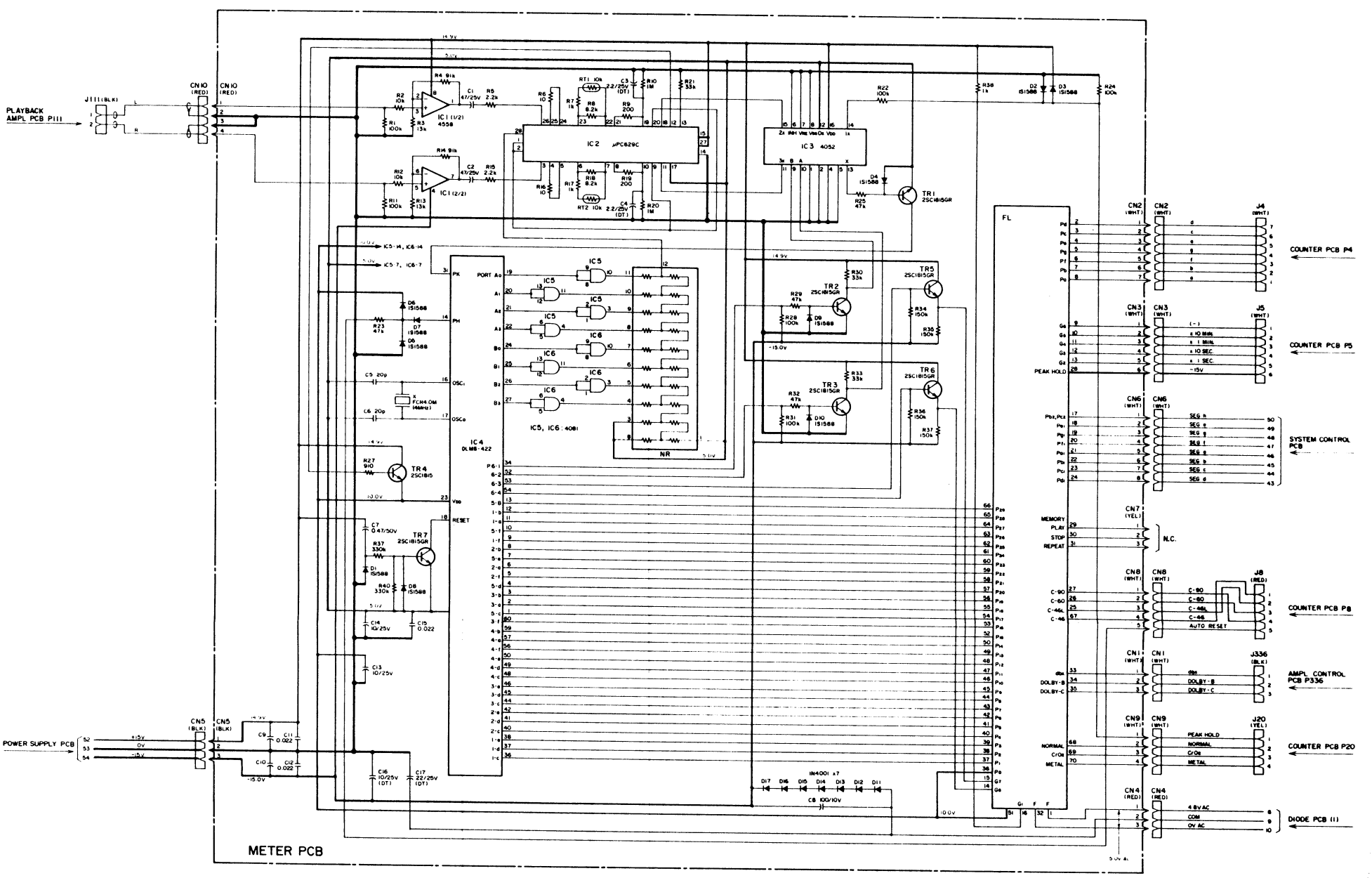
1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. Voltage and signal level values are for reference only.
   0dB=0.775V
4. ▭ : Front panel indication
5. ┅┅ : Rear panel indication
6. ——— : +B power supply circuit
7. ——— : −B power supply circuit
8. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

注意

1. 抵抗の単位はΩ(k＝kΩ, M＝MΩ)です
2. コンデンサの単位はμF(p＝pF)です.
3. 電圧及び信号レベルは参考値です.
   0dB＝0.775V
4. ▭ : フロント・パネル上の表示
5. ┅┅ : リア・パネル上の表示
6. ——— : +B電源回路
7. ——— : −B電源回路
8. ⚠ マークのある部品は安全重要部品です.
   交換するときは必ずティアック指定の部品を使用してください.

INSTRUCTIONS FOR SERVIC
BEFORE RETURNING APPLIANCE
MAKE LEAKAGECURRENT OR R
MENTS TO DETERMINE THAT EXP
CEPTABLY INSULATED FROM THE SU



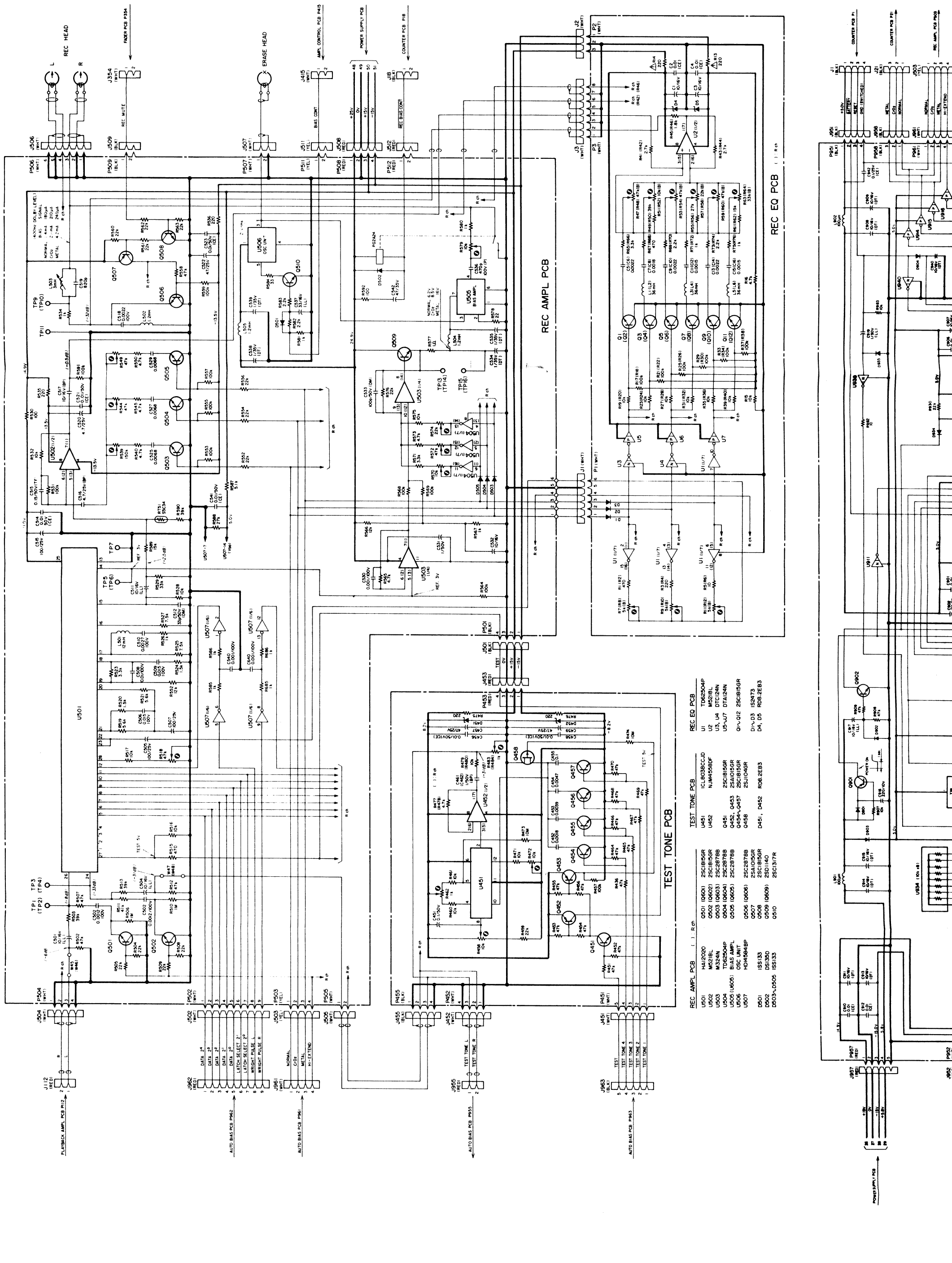


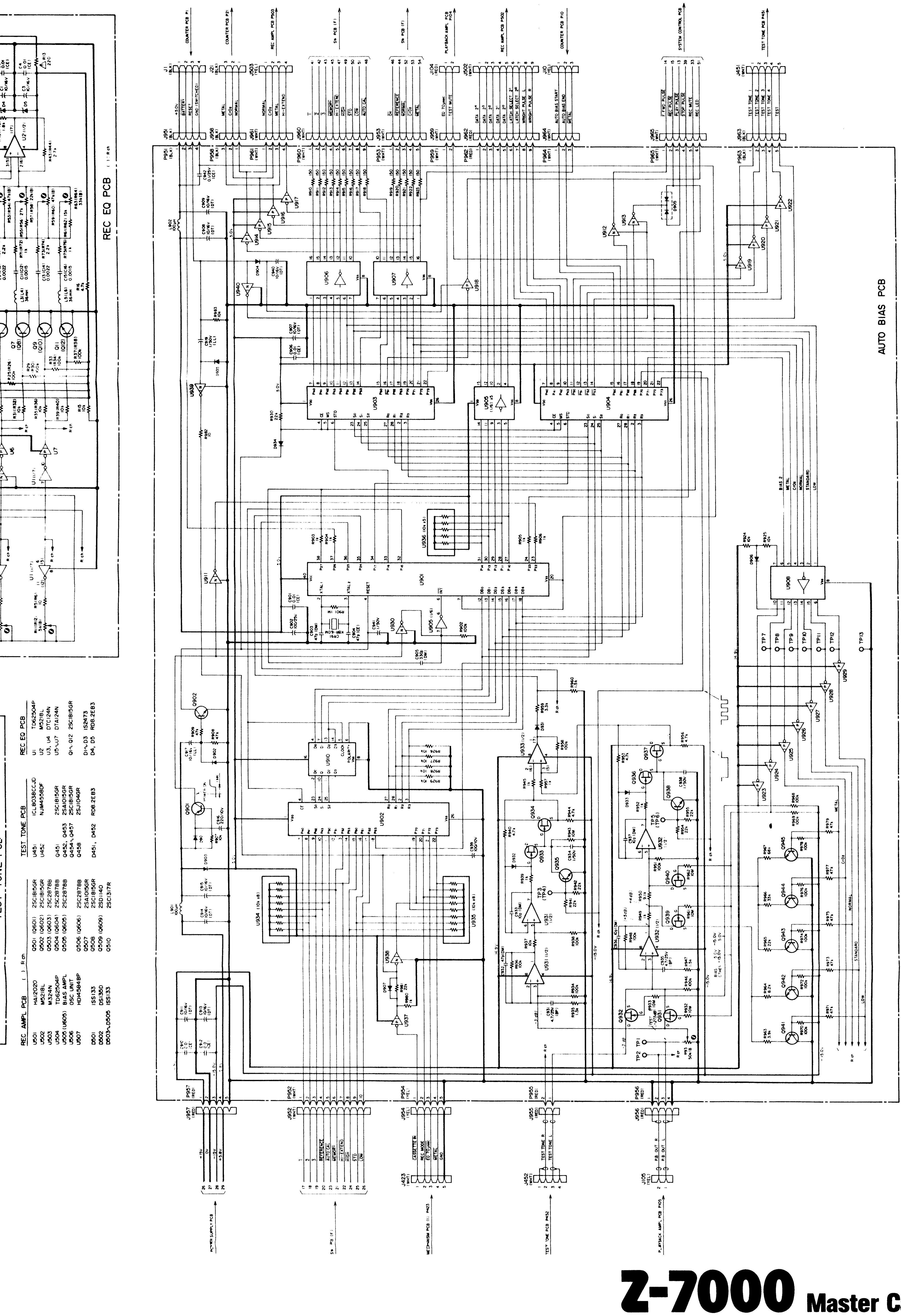
INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGECURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Z-7000 Master Cassette Deck

TEAC SCHEMATIC DIAGRAM Z-7000





REC AMPL PCB ( ) : R ch

U501	HA12020
U502	M5218L
U503	M324N
U504	TD62504P
U505 (U605)	BIAS AMPL
U506	OSC UNIT
U507	HD14584BP
D501	1SS133
D502	DS135D
D503~D505	1SS133
Q501 (Q601)	2SC1815GR
Q502 (Q602)	2SC1815GR
Q503 (Q603)	2SC2878B
Q504 (Q604)	2SC2878B
Q505 (Q605)	2SC2878B
Q506 (Q606)	2SC2878B
Q507	2SA1015GR
Q508	2SC1815GR
Q509 (Q609)	2SD1140
Q510	2SC1317R

TEST TONE PCB

U451	ICL8038CCJD
U452	NJM4558DF
Q451	2SC1815GR
Q452, Q453	2SA1015GR
Q454~Q457	2SC1815GR
Q458	2SJ104GR
D451, D452	RD8.2EB3

REC EQ PCB

U1	TD62504P
U2	M5218L
U3, U4	DTC124N
U5~U7	DTA124N
Q1~Q12	2SC1815GR
D1~D3	1S2473
D4, D5	RD8.2EB3

( ) : R ch

U901	MBL80C49N102
U902	M50784SP
U903	M50781SP
U904	M50781SP
U905	HD14049UBP
U906	M54517P
U907	M54517P
U908	TD62504P
U909	——
U910	MC4042B
U911~U913	DTC124N
U914~U920	DTA124N
U921~U928	DTA124N
U929, U930	DTC124N
U931 (U031)	M5218L
U932 (U032)	M5218L
U933	M5218L
U934	10k x8
U935	10k x8
U936	10k x5
U937	DTA124N
U938	DTA124N
U939	DTC124N
U940	DTC124N
Q901	2SA1015GR
Q902	2SC1815GR
Q931 (Q031)	2SK117GR
Q932 (Q032)	2SK117GR
Q933 (Q033)	2SK117GR
Q934 (Q034)	2SK117GR
Q935 (Q035)	2SD655E
Q936 (Q036)	2SK117GR
Q937 (Q037)	2SK117GR
Q938 (Q038)	2SD655E
Q939 (Q039)	2SK117GR
Q940 (Q040)	2SK117GR
Q941 (Q041)	2SC2878B
Q942 (Q042)	2SC2878B
Q943 (Q043)	2SC2878B
Q944 (Q044)	2SC2878B
Q945 (Q045)	2SC2878B
D901, D902	1S2473HJ
D903	DS135
D904	1SS133
D905	MC921
D906	1S2473HJ
D931 (D031)	1S2473HJ
D932 (D032)	1S2473HJ
D933 (D033)	1S2473HJ
D934	1S2473HJ
D935	1S2473HJ

TEAC SCHEMATIC DIAGRAM Z-7000

1 2 3 4 5 6

SYSTEM CONTROL PCB

Z-7000 Master Cassette Deck

SYSTEM CONTROL PCB

COUNTER PCB

U1	MSM80C49-28 RS	U6	HD74LS375	U11	M54517P	U16	NJM2403D	U21	10k x 8	Q1	2SA733P	Q6	2SA733P	D1	DS135D	D15	DS135D
U2	M50780SP	U7	M54517P	U12	M54533P	U17	HD14584BP	U22	HD14013B	Q2	2SC1383S	Q7	2SC945AK	D2	—	D16, D17	1S2473
U3	LC7800	U8	M54560P	U13	M54560P	U18	100k x 7	U23	HD14538BP	Q3	2SA733P	Q8	2SA733P	D3	1S2473	D18	RD4.7EB
U4	HD74LS221	U9	M54533P	U14	M54516P	U19	100k x 6			Q4	2SB507E	Q9	2SC945AK	D7 ∿ D6	DS135D	D19	—
U5	HD74LS375	U10	M54560P	U15	HD14069UBP	U20	100k x 6			Q5	2SA733P			D7 ∿ D14	1S2473	D20	DS135D

TEAC SCHEMATIC DIAGRAM Z-7000

1 2 3 4 5 6

A B C D E F G H

AMPL CONTROL PCB

TRANSISTOR PCB

DIODE PCB (1)

POWER SW PCB

SW PCB (A)

SW PCB (C)

SYSTEM CONTROL PCB

POWER SUPPLY PCB

COUNTER PCB P3

U330	LC7800
U331	HD44750A64
U332	HD14049B
U333	HD14011B
U334	M54517P
U335	M54516P
U336	M54517P
U337	M54517P
U338	M54517P
U339	HD14049B
Q330	2SA1015GR
Q331	2SA1015GR (Not used)
Q332	2SA1015GR
Q333	2SC1815GR
Q334	2SA1015GR
Q335	2SA1015GR
Q336	2SA1015GR
Q337	2SC1815GR
Q338	2SC1815GR
Q339	2SC1815GR
D330	1SS133
D331	DSI35D
D332	DSI35D
D333	1SS133
D334	1SS133HV
D335	1SS133K

Q337	2SC1815GR
Q338	2SC1815GR
Q339	2SC1815GR
D330	ISS133
D331	DSI35D
D332	DSI35D
D333	ISS133
D334	ISS133HV
D335	ISS133K

U336 pin 8, U337 pin 6, U338 pin 8, U339 pin 8

U332 U334 L332 100μH

CB +5.8V

P341 (BLK) J341 (BLK) J22 (WHT) COUNTER PCB P22

AMPL CONTROL PCB

TRANSISTOR PCB

Q60 2SD313E Q61 2SD313E Q62 2SB504E Q63 2SD313E Q64 2SD313E

R80 R81 R82 R83 R84 R85 R86 R87 R88 R89 R90 R91 R92 R93 R94

TP1 Q50 2SD313E R53 2.2Ω R54 560 R52 5.6k R51 3.3k C54 22/10V D50 RD5.1EB2 C55 10/16V

U50 M5231L R50 100 C50 4700/50V C51 47/25V C52 100p/50V (CE) C53 0.01/50V (CE)

TP3 R55 560 C56 1000/35V C58 47/25V C59 47/25V C57 1000/35V R56 560 U51 M5230L C62 10/16V R58 24k 2% C60 4.7/35V R57 3.3k 2% C61 4.7/35V

R60 15k 2% C63 10/16V C65 0.01/50V(CE) R59 15k 2% C64 10/16V C66 0.01/50V(CE)

TP4 D51 DSI35D D52 DSI35D R61 10k D53 DSI35D R62 100k R63 8.2k Q51 2SA1015GR C67 0.01/50V(CE) C68 220/16V C69 220/10V C71 1/50V C70 47/10V

56 R64 (1/4W)

TP2 R65 560 U52 M5231L C74 47/25V C72 1000/50V C77 10/16V R68 10k(B) R67 39k R66 3.3k C76 100p/50V (CE) C78 22/35V

TP5 R69 560 U53 M5231L C75 47/25V C73 2200/35V C80 10/16V R71 22k 2% R70 3.3k 2% C79 100p/50V (CE) C81 22/25V

POWER SUPPLY PCB

J957 (RED) AUTO BIAS PCB P957

J1183 (YEL) MIC AMPL PCB P1183

J338 (WHT) AMPL CONTROL PCB P338

J351 (WHT) FADER PCB P351

J1106 (WHT) PLAYBACK AMPL PCB P1106 POWER MUTE

J514 (BLK) REC AMPL PCB P514

CN5 (BLK) METER PCB CN5

J305 (WHT) DOLBY PCB P305 PLAYBACK AMPL PCB P116 (J116)-1

J410 (BLK) SYSTEM CONTROL PCB P410

J425 (WHT) MECHANISM PCB (1) P425

J2 (YEL) COUNTER PCB P2

CN4 (RED) METER PCB CN4

J1189 (RED) MIC AMPL PCB P1189 POWER MUTE

DIODE PCB (1)

C91 0.01/500V (CE) D91 DBA60C

DIODE PCB (2)

C92 0.01/500V (CE) D92 DBA60C C93 0.01/500V (CE)

DIODE PCB (3)

C94 0.01/500V (CE) D93 DBA60C C95 0.01/500V (CE)

CONDENSER PCB

R90 10 D94 DSI35D C96 4700/25V C97 4700/25V

POWER SW PCB

POWER S1 Z1 C90 0.1/250V

T1 YEL WHT YEL VIO VIO RED BLK RED ORG ORG BLU BRN BLU

F1 3A F2 3A F3 3A F4 1A F5 7A F6 7A

FUSE PCB

120V AC 60Hz 120V BRN 0V WHT

Z1: U.S.A. 0.033μF + 120Ω / 125VAC CANADA 0.033μF + 120Ω / 250VAC

U.S.A., CANADA

AUSTRALIA U.K. BRN (LIVE) BLU (NEUTRAL) 240VAC 50Hz 240V RED 220V VIO 0V WHT

F1 T3.15A F2 T3.15A F3 T3.15A F4 T1A F5 T6.3A F6 T6.3A

FUSE PCB

U.K., AUSTRALIA

POWER SW PCB

POWER S1 Z1 0.0047μF/250V C90 0.1/250V

220VAC 50Hz 240V RED 220V VIO 0V WHT

F1 T3.15A F2 T3.15A F3 T3.15A F4 T1A F5 T6.3A F6 T6.3A

FUSE PCB

EUROPE

POWER SW PCB

POWER S1 Z1 0.01μF + 300Ω /400V

100/120 220/240VAC 50/60Hz P 240V RED 220V VIO 120V BRN 100V GRY 0V WHT

GENERAL EXPORT

POWER SW PCB

POWER S1 Z1 0.01μF + 300Ω /400V

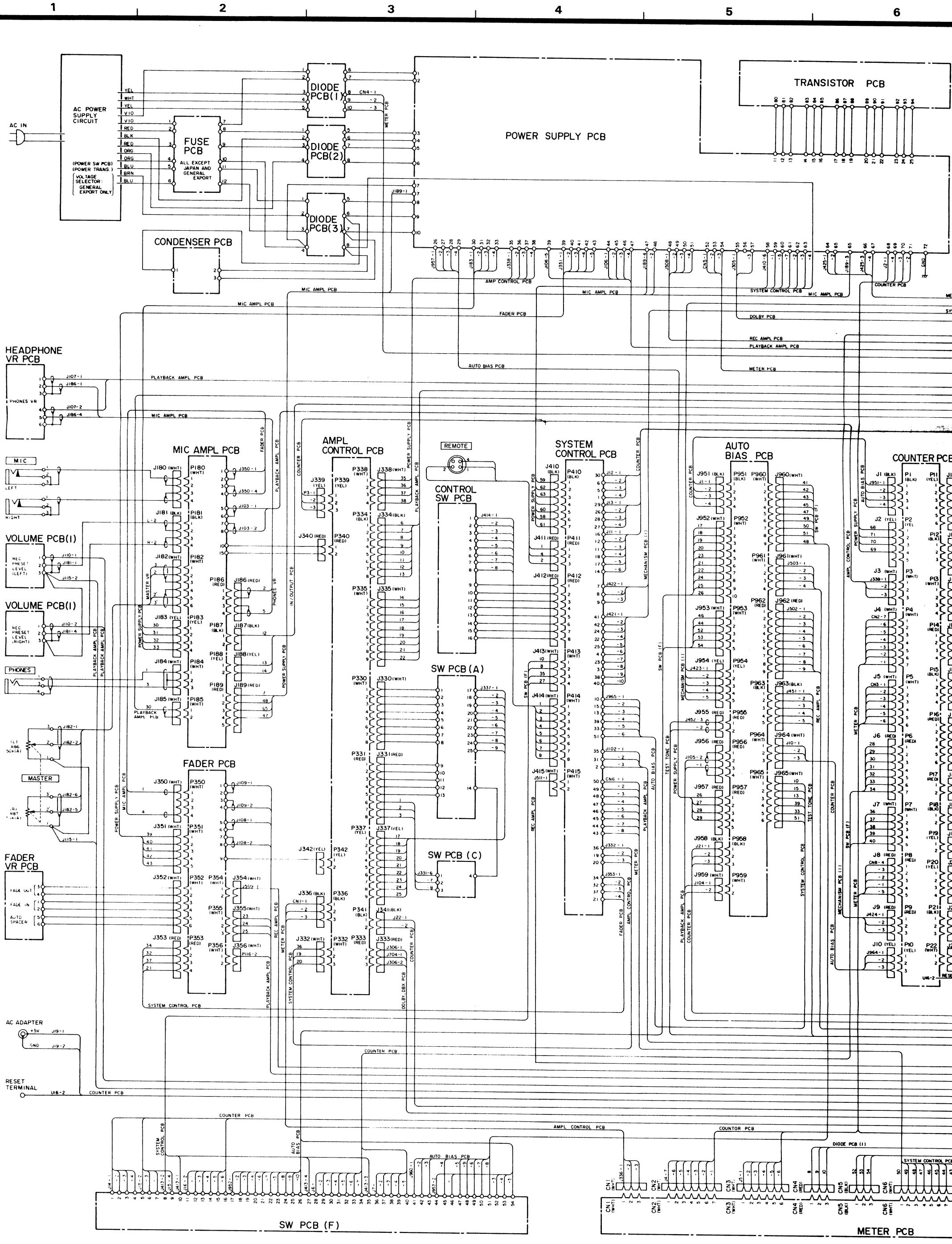
100VAC 50/60Hz 100V GRY 0V WHT

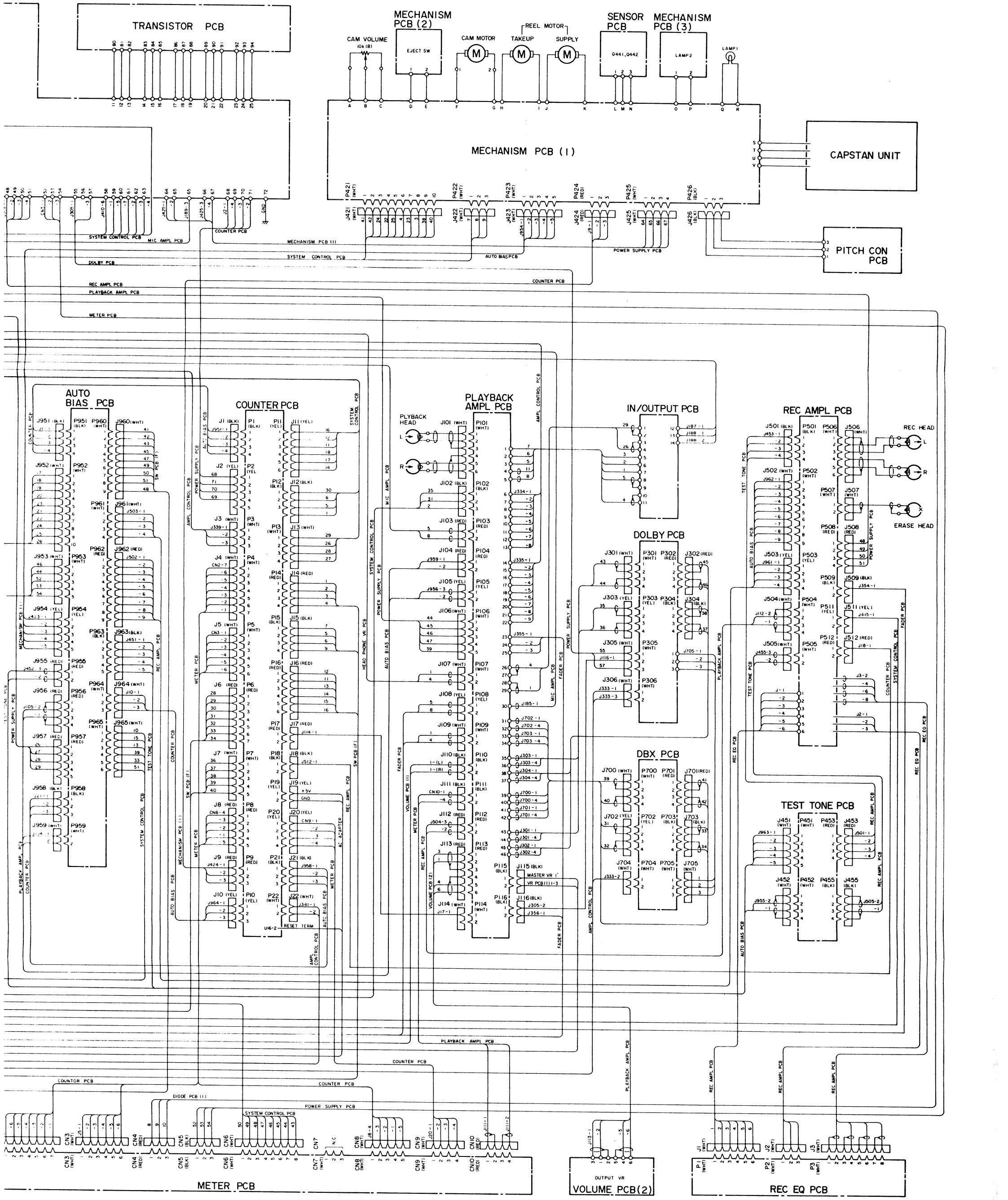
JAPAN

Z-7000 Master Cassette Deck

5 6 7 8 9 10

TEAC SCHEMATIC DIAGRAM Z-7000





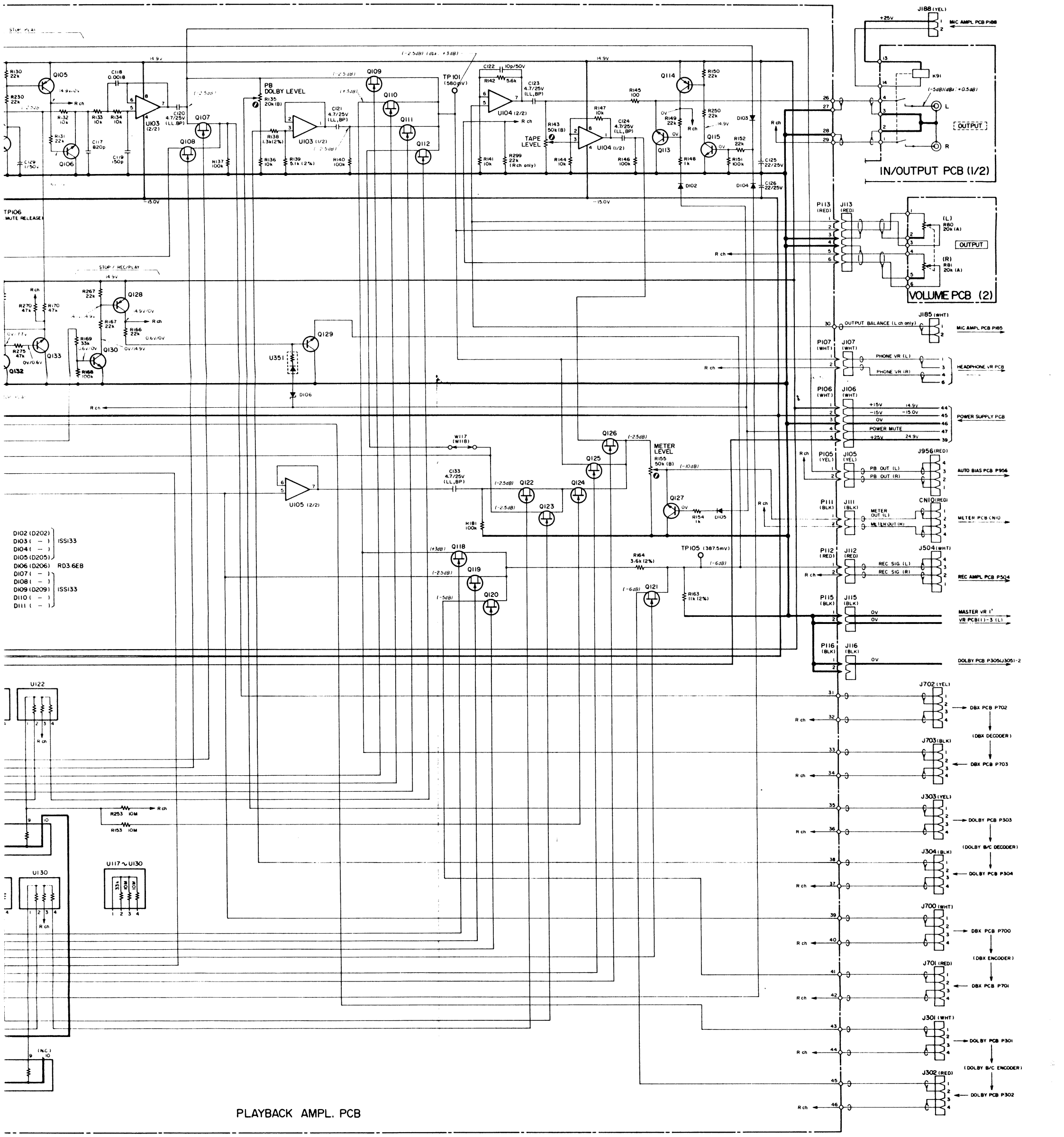
Z-7000 Master Cassette Deck

TEAC SCHEMATIC DIAGRAM Z-7000

( ) : R ch

U101 (U201)	2SK2706R	Q101 (–)	2SD655E	Q115 (–)	2SC1685R,Q,S		
U102 (U202)	NJM4560DX	Q102 (–)	2SC1685R,Q,S	Q116 ∼ Q126 (Q216 ∼ Q226)	2SK364BL	D102 (D202)	
U103 (U203)	NJM4560DX	Q103 (–)	2SA1015GR			D103 (–)	ISS133
U104 (U204)	NJM4560DX	Q104 (–)	2SC1685R,Q,S	Q127 (Q227)	2SD655E	D104 (–)	
U105 (U205)	NJM4560DX	Q105 (–)	2SA1015GR	Q128 (–)	2SA1015GR	D105 (D205)	
						D106 (D206)	RD3.6EB
U106 (–)	DTA124N	Q106 (Q206)	2SD655E	Q129 (Q229)	2SD655E	D107 (–)	
U107 (–)	DTC124N	Q107 ∼ Q112 (Q207 ∼ Q212)	2SK346BL	Q130 (–)	2SC1685R,Q,S	D108 (–)	
				Q131 (–)	2SD655E	D109 (D209)	ISS133
U351		Q113 (Q213)	2SD655E	Q132 (–)	2SC1685R,Q,S	D110 (–)	
		Q114 (–)	2SA1015GR	Q133 (–)	2SD655E	D111 (–)	

PLAYBACK A



Z-7000 Master Cassette Deck